ENVIRONMENTAL ASSESSMENT

VOLKMAR LAND EXCHANGE PROPOSAL AND NELLIS AIR FORCE BASE WITHDRAWAL

NV-930-1430-00
N-62765, N-55975

Prepared For

Bureau of Land Management

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Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
15 JAN 1999	**N/A**	

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Environmental Assessment Volkmar Land Exchange Proposal and Nellis Air Force Base Withdrawal, Vol 1	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Bureau of Land Management**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited.

13. SUPPLEMENTARY NOTES
The original document contains color images.

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**UU**	**72**	

ENVIRONMENTAL ASSESSMENT
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AND
NELLIS AIR FORCE BASE WITHDRAWAL

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ACRONYMS

Listed below are key or frequently used acronyms in this document.

ACECs	Areas of Critical Environmental Concern
af/yr	Acre feet per year
APCD	Clark County Air Pollution Control Division
APE	Area of Potential Effect
BGS	Below ground surface
BLM	Bureau of Land Management, U.S. Department of the Interior
CCRFCD	Clark County Regional Flood Control District
CFR	Code of Federal Regulations
CO	Carbon monoxide
DCP	Desert Conservation Plan
EA	Environmental Assessment
EPA	U.S. Environmental Protection Agency
FLEFA	Federal Land Exchange Facilitation Act
FLPMA	Federal Land Policy Management Act
LOLA	Live Ordinance Loading Area
LVVWD	Las Vegas Valley Water District
MFP	Management Framework Plan
MPR	Minerals Potential Report
NAAQS	National Ambient Air Quality Standards
Nellis AFB	Nellis Air Force Base
NEPA	National Environmental Policy Act
NOx	Nitrogen Oxides
NRA	National Recreation Area
NRHP	National Register of Historic Places
ORV	Off-Road vehicle
PM1O	Particulate matter with an aerodynamic diameter of 10 microns or less; PM, dust likely to be suspended in the air column as a result of ground disturbance
QD	Quantity Distance
R.	Range
RRCNCA	Red Rock Canyon National Conservation Area
RMP	Stateline Resource Management Plan/Environmental Impact Statement
sec	Section
S02	Sulphur Dioxide
TDS	Total Dissolved Solids

TE&S	Threatened, Endangered, and Species of Concern
T.	Township
TSP	Total Suspended Particulates
USDI	U.S. Department of the Interior
BLM	Bureau of Land Management
USFWS	U.S. Fish & Wildlife Service
VOC	Volatile Organic Compounds

BACKGROUND

On March 10, 1994 (later amended on November 28, 1994 and January 14, 1999), Carl Volkmar entered into an agreement with the BLM to initiate a land exchange. In August 1995, a feasibility report was prepared which identified approximately 1,123 acres of Federal lands and approximately 535 acres of non-Federal lands to be included in the exchange. In the feasibility report, it was determined that the exchange would benefit the management of the Red Rock Canyon National Conservation Area since it would help to eliminate private in holdings. Additionally, BLM management of the private lands at Frenchman's Mountain would allow trailheads to be constructed and aid in the protection of the viewshed.

The Federal lands included 6 parcels (1,123 acres) located in the Las Vegas Valley within T. 20 S., R. 60 E., secs. 27 and 28; T. 21 S., R 60 E., secs. 15, 21, and 24; T. 22 S., R. 61 E., secs. 14 and 32. All of the lands identified are within the Stateline Resource Management Plan/Environmental Impact Statement (RMP) disposal boundary. All of the parcels located in T. 20 S., R. 60 E. and T. 21 S., R 60 E. are within the Satini-Burton boundary.

The non-Federal lands included three parcels located in the Las Vegas Valley in Clark County, Nevada. Two of these parcels are within the Red Rock Canyon National Conservation Area. The other parcel is located on the western foothills of Frenchman Mountain and is adjacent to public lands.

In December 1996, Nellis Air Force Base completed an explosives site plan for the live ordinance loading area. This site plan expanded the Quantity Distance (QD) arcs for the live ordinance loading area and the evacuation zone outside of the current Nellis Air Force Base boundaries. These QD arcs are established in order to provide safety buffers between potentially hazardous areas and populated areas.

Nellis Air Force Base has formally sited two QD arcs around the live ordinance loading area. The first QD arc consists of a 1,400 feet radius within which no inhabited buildings are acceptable. The second QD arc is the evacuation zone which consists of a 4,000 foot radius in which only low density or light manufacturing is acceptable.

Within the QD arcs, approximately 2,400 acres were identified for acquisition by the Air Force for public safety and to comply with Department of Defense regulation 6055.9 regarding ammunition and ~~explosion~~ explosive safety standards. Of the lands identified for acquisition, approximately 1,700 acres

are currently managed by the BLM Stateline District and approximately 760 acres are privately owned.

In order to facilitate the acquisition of these lands in a timely and cost effective manner, the Air Force and Carl Volkmar proposed that the 760 acres of privately owned parcels within the QD arcs be transferred to the BLM through the existing Volkmar land exchange. Upon transfer of the lands to the BLM, the 760 acres as well as the 1,700 acres of land currently managed by the BLM would be withdrawn to the Air Force.

In June 1998, the BLM published a "Notice of Proposed Withdrawal and Amended Notice of Exchange Proposal; Nevada". The notice includes all of the lands identified by the Air Force for acquisition as well as 93 acres of private lands in the Lake Tahoe Basin Management Unit of the Forest Service and 1,614 acres of Federal lands in Clark County.

In August 1998, appraisals were completed on all of the non-Federal lands except the private lands located in the Lake Tahoe Basin Management Unit. Appraisals were also completed for all of the original Volkmar Federal lands located outside of the Santini-Burton sale area. Based on the land values presented in the appraisals, the scope of the Volkmar exchange has been narrowed to include the following:

PHASE 1:

The first phase will consist of approximately 235 acres of Federal lands located in T. 22 S., R. 61 E., sec. 32. The non-Federal lands will consist of two parcels, comprising 183 acres, located within the Red Rock Canyon National Conservation Area in Clark County, Nevada. All of the lands, Federal and non-Federal, were addressed in the August 1995 feasibility report and are included in the first phase due to the extent of processing already completed on them.

The environmental resources, which may be affected by Phase 1, are similar for the Federal and non-Federal lands. Phase 1 would benefit the environmental resources located in the action area through the consolidation of private in holdings within the Red Rock Canyon National Conservation Area in exchange for isolated tracts of Federal lands interspersed with private in holdings which make management of the Federal lands difficult (Environmental Assessment-N58563, incorporated herein by reference).

PHASE 2:

The second phase will consist of approximately 760 acres of Federal lands. The Federal lands will include 215 acres located in T. 22 S., R. 61 E., sec. 32, which were addressed in the August 1995 feasibility report. The remaining 390 acres of Federal lands are located in T. 22 S., R. 60 E., secs 12, 13, and 36, and T. 23 S., R. 61 E., sec.6. The non-Federal lands will consist of the above mentioned 760 acres located within the QD arcs adjacent to Nellis Air Force Base. Upon transfer of the 760 acres to Federal stewardship, these lands and an additional 1,700 acres of BLM land will be withdrawn to the Air Force.

The purpose of the following Environmental Assessment is to assess the environmental consequences of the transfer to Federal stewardship of the 760 acres of non-Federal lands located within the QD arcs adjacent to Nellis Air Force Base and the subsequent withdrawal of those lands and an additional 1,700 acres of Federal lands to the Air Force. This Environmental Assessment will also assess the environmental consequences of the transfer of the 390 acres of Federal lands which were not included in the August 1995 feasibility report. Phase 1 of the land exchange would result in a benefit to the environmental resources of the action area. Therefore the environmental effects of Phase 1 of the land exchange would not adversely contribute to the overall environmental consequences of the action as a whole. Therefore the environmental consequences presented in the following Environmental Assessment constitute the entirety of the adverse environmental consequences for the action as a whole.

EXECUTIVE SUMMARY

The Proposed Action, including Phase 1 and Phase 2, would include:

- The disposal of approximately 840 acres of Federal lands;
- The acquisition of approximately 943 acres of Non-Federal lands; and
- The withdrawal of approximately 2,400 acres of Federal lands to the Air Force.

The Proposed Action would result in the following beneficial environmental consequences:

- The disposal of approximately 840 acres of Federal lands that are interspersed with private parcels thus making management of those Federal lands difficult;
- The disposal of Federal lands that add to the burdensome task of processing piecemeal rights-of-ways for current development on the adjacent private parcels;
- The disposal of Federal lands that would meet the important public purpose of providing for orderly community expansion;
- The acquisition of approximately 183 acres of non-Federal lands, which would result in the elimination of private in holdings within the Red Rock Canyon National Conservation Area;
- The acquisition and consolidation of approximately 760 acres of non-Federal lands located adjacent to Nellis Air Force Base which will be used to provide a permanent buffer area to ensure public health and safety as well as maintain air and ground crew readiness and live ordinance training programs; and
- The withdrawal of approximately 2,400 acres to the Air Force to be managed for the public benefit of providing safety zones adjacent to Nellis Air Force Base pursuant to Department of Defense Directive 6055.9. The withdrawal of these lands to the Air Force would also ensure public health and safety as well as maintain air and ground crew readiness and live ordinance training programs.

CHAPTER 1.0 PURPOSE OF AND NEED FOR ACTION

1.1 INTRODUCTION

On March 10, 1994 (later amended on November 28, 1994 and January 14, 1999), Carl Volkmar (Proponent) entered into an agreement with the Bureau Land Management (BLM) to initiate a land exchange. In December 1996, Nellis Air Force Base completed an explosives site plan for the live ordinance loading area. This site plan expanded the Quantity Distance (QD) arcs for the live ordinance loading area and the evacuation zone outside of the current Nellis Air Force Base (Nellis AFB) boundaries on to non-Federal (privately owned) and Federal lands managed by the BLM. These QD arcs are established in order to ensure that there are safety buffers between potentially hazardous areas and populated areas. Therefore, Nellis AFB proposes to acquire management of the non-Federal and Federal lands within the QD arcs.

In order to facilitate the acquisition of these lands in a timely and cost effective manner, Nellis AFB and the Proponent propose to transfer approximately 760 acres of non-Federal lands within the QD arcs to the BLM through the existing Volkmar land exchange. Upon transfer of the lands to the BLM, the approximately 760 acres as well as approximately 1,700 acres of land currently managed by the BLM would be withdrawn to Nellis AFB.

Due to the extent of processing on the Federal and non-Federal lands identified in the March 1994 (later amended in November 1994) agreement between the Proponent and the BLM to initiate a land exchange, it was decided to complete the exchange in two phases.

Phase 1 consists of exchanging Federal lands located along I-15 between Blue Diamond Road and Lake Mead Drive, for non-Federal lands located in Red Rock Canyon National Conservation Area (RRCNCA). On March 7, 1997, an Environmental Assessment (EA) (NV-056-98-076) was prepared which identified approximately 1,060 acres of Federal lands and approximately 523 acres of non-Federal lands to be included in the exchange. All of the lands, both Federal and non-Federal, are located within Clark County, Nevada in the Las Vegas Valley. This EA resulted in a Finding of No Significant Impact (FONSI) dated ?????(Appendix B). The BLM made the determination that approximately 235 acres of Federal land in Parcel 1 (T. 22 S., R. 61 E., sec. 32) would be exchanged for approximately 183 acres of non-Federal lands identified as Parcel 2, located within the RRCNCA in a Decision Record (DR) for Phase 1 dated ?????(Appendix B).

In fiscal year 1999, the Bureau of Land Management (BLM) proposes to exchange approximately 605 acres of Federal lands in the Las Vegas Valley, Clark County, Nevada for approximately 760

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In fiscal year 1999, the Bureau of Land Management (BLM) proposes to exchange approximately 605 acres of Federal lands in the Las Vegas Valley, Clark County, Nevada for approximately 760

acres of non-Federal lands adjacent to Nellis AFB, Clark County, Nevada with the Proponent pursuant to 43 CFR 2201.1-1. The Federal lands have been slated for disposal in the Stateline Resource Management Plan/Environmental Impact Statement (RMP). The non-Federal lands are located adjacent to Nellis AFB and, upon transfer to Federal stewardship, will be withdrawn to Nellis AFB along with an additional 1,700 acres of Federal lands pursuant to 43 CFR 2300. Maps provided in the tabbed indexes at the end of this chapter show; a vicinity map (Drawing 1), the Federal lands (Drawing 2), the non-Federal lands (Drawing 3), and the Federal withdrawal lands (Drawing 4).

This Environmental Assessment (EA) has been prepared to analyze the proposed action as required by the National Environmental Policy Act (NEPA) and BLM guidelines. Environmental impacts regarding the disposal of public lands in the Las Vegas Valley, the public acquisition of non-Federal lands adjacent to Nellis AFB, and the withdrawal of the non-Federal lands as well as an additional 1,700 acres of Federal lands will be addressed in this document.

1.2 PURPOSE OF AND NEED FOR ACTION

The purpose of and need for the proposed land exchange and withdrawal is:

1) To dispose of isolated tracts of Federal lands that are interspersed with private lands thus making Federal management difficult and creating a burdensome task of processing piecemeal rights-of-ways required to accommodate surrounding growth;

2) To acquire contiguous blocks of private lands located within the safety zones adjacent to Nellis AFB to ensure public health and safety as well as maintain air and ground crew readiness and live ordinance training programs at Nellis AFB; and

3) To withdraw to the Air Force all lands required to comply with Department of Defense Directive 6055.9, so that the lands would be managed by the Air Force to provide a permanent safety buffer around the live ordinance loading area at Nellis AFB. The management of the withdrawal lands as a permanent safety buffer would ensure public health and safety as well as maintain air and ground crew readiness and live ordinance training programs at Nellis AFB.

The following is a comprehensive presentation of the purpose and need for the proposed action. Although the purpose and need for the proposed action is presented for each component of the proposed action, the environmental consequences are assessed for the proposed action as a whole since the individual components of the proposed action are interdependent on one another. The acquisition of the non-Federal lands could not occur without the disposal of the Federal lands, and the withdrawal of the non-Federal lands to Nellis AFB must be included with the withdrawal of all

of the lands required to meet the desired objective of promoting public health and safety pursuant to Department of Defense Directive 6055.9. It would be inconsistent with the procedural requirements of FLPMA and NEPA to separate the components of the proposed action into individual actions. Therefore, the proposed action must be viewed in its entirety to meet the procedural requirements of the Federal regulations. Therefore, Chapters 2 and 4 present the combined environmental consequences of the all of the components of the proposed action for Phase 2.

DISPOSAL OF FEDERAL LANDS

The purpose of and need for disposal of the Federal lands is a result of the fragmented growth pattern in the Las Vegas Valley and to accommodate orderly community expansion.

> *"Section 203 of Public law 94-579 (FLPMA) provides for disposal of public lands when such conditions exist that make Federal Management difficult and disposal would meet important public purposes such as community expansion"*

The Federal lands are comprised of approximately 605 acres of isolated, non-contiguous blocks of land interspersed with private lands in the southwest area of the Las Vegas Valley. The lands proposed for disposal are within the boundaries of this growing metropolis and are generally isolated from larger blocks of public lands. As a result, management is difficult and public access is limited. Current development of the interspersed private lands has also made management of the Federal lands difficult and resulted in a burdensome task of processing piecemeal easement requests for public utilities and access required to accommodate the surrounding growth.

The cities of Henderson, Las Vegas, North Las Vegas, and the unincorporated areas surrounding these municipalities are considered to comprise one of the fastest growing metropolitan areas in the United States (USDI, 1992). Henderson is the nation's fastest growing city with a 57% population increase in five years (Metropolitan Research Association, 1996). The Federal lands that are proposed for disposal are interspersed with private lands that are zoned for development of residential, commercial and industrial uses. Use of the Federal lands subsequent to disposal would include orderly community expansion that is consistent with adjacent land uses and would help to reduce the piecemeal development that currently exists in the southwest area of the Las Vegas Valley.

Section 206 of FLPMA provides for the exchange of public lands administered by the BLM and may involve private landowners, non-Federal entities, and Federal departments or agencies. Land

exchanges allow the BLM to follow the standards and guidelines of the Las Vegas Resource Management Plan and Final Environmental Impact Statement (RMP) (i.e. land disposal) while acquiring lands for public benefit and to enhance Federal land management. Through the proposed action, the BLM would acquire approximately 760 acres of lands adjacent to Nellis Air Force Base in Clark County, Nevada.

ACQUISITION AND WITHDRAWAL OF THE NON-FEDERAL LANDS

The purpose of and need for acquisition of the non-Federal lands by BLM and subsequent withdrawal by Nellis AFB is the result of a recently completed explosives site plan related to a mission change for the base as required by Department of Defense Directive 6055.9 . This site plan expanded the Quantity Distance (QD) arcs for the Live Ordinance Loading Area (LOLA) safety zone and evacuation zone outside of the current Nellis AFB boundaries. These QD arcs are established in order to provide safety buffers between potentially hazardous areas and populated areas. In general the smaller the radius of the QD arc the higher the risk to public safety, and the larger the radius the less the risk to public safety.

Nellis AFB has identified two QD arcs around the LOLA. The first QD arc is a safety zone with a 1,400 feet radius within which no inhabited buildings are acceptable. The second QD arc is the evacuation zone with a 4,000 feet radius in which only low density or light manufacturing is acceptable.

The non-Federal lands comprise approximately 760 acres located adjacent to Nellis AFB and are within LOLA safety and evacuation zones. In order to satisfy Directive 6055.9, the approximately 760 acres of non-Federal lands would be transferred to Federal stewardship through this proposed land exchange and withdrawn by Nellis AFB.

The acquisition and subsequent withdrawal of the non-Federal lands to Nellis AFB would provide for public safety by limiting future use of those lands to a buffer zone, thus ensuring protection for residents and visitors in case of an emergency. Acquisition and withdrawal of the non-Federal land to the Air Force would also prevent degradation of the air and ground crew readiness and live ordinance training programs at Nellis AFB.

WITHDRAWAL OF THE FEDERAL LANDS

The purpose and need for withdrawal of the approximately 1,700 acres of Federal lands to the Air Force is to promote public safety and to comply with Department of Defense regulation 6055.9 regarding ammunition and explosion safety standards. Withdrawal of these lands to Nellis AFB would create a permanent buffer around the live ordinance loading area (LOLA). Creation of a

permanent buffer around the LOLA would ensure public safety and prevent degradation of the air and ground crew readiness and live ordinance training programs at Nellis AFB.

1.3 DECISION TO BE MADE

Based on the conclusions of this EA, the BLM decision maker may choose one of the following options:

a. To not allow the proposed action; which would prevent the federal acquisition of the approximately 760 acres of non-Federal lands, would prevent the disposal of the approximately 605 acres of Federal lands, and would prevent the withdrawal of the non-Federal lands and an additional 1,700 acres of Federal lands to the Air Force (No Action), or

b. To allow the proposed action; which would result in the Federal acquisition of 760 acres of non-Federal private lands, would transfer 605 acres of Federal lands to private ownership, and would withdraw the non-Federal lands and an additional 1,700 acres of Federal lands to Nellis AFB (Proposed Action).

If the BLM chooses the Proposed Action, the non-Federal lands would be withdrawn to Nellis AFB for inclusion into their boundaries. Management of the non-Federal lands and the additional 1,700 acres of Federal lands withdrawn to Nellis AFB would be the responsibility of the Department of Defense.

1.4 PUBLIC SCOPING

Scoping for the proposed action included a *Notice of Exchange Proposal between the Bureau of Land Management and Carl Volkmar* placed in the Las Vegas Review Journal, Reno Gazette, and the Tahoe Daily Tribune as required by 43 CFR 2201.2 on July 8, 1998. The notices were published once per week for four consecutive weeks. The public had 45 days to comment from the date of initial publication of the notice. No issues of concern were raised during the public scoping period.

Scoping for the proposed action also included a *Notice of Proposed Withdrawal and Amended Notice of Exchange Proposal; Nevada* placed in the Federal Registrar on July 29, 1998. No issues of concern were raised during this additional scoping period.

Other important issues were raised in previous land exchanges which are applicable to this land exchange. These issues are not related to this land exchange, but are related to the anticipated uses of the Federal lands once the exchange has occurred. These issues include:

- Decrease in air quality as a result of development of Federal lands subsequent to the land exchange. Air quality may be impacted from two sources: 1) increase in dust and carbon monoxide due to construction activities; and 2) higher carbon monoxide output from automobile exhaust as a result of increased traffic in newly developed areas;

- Water availability for newly developed areas subsequent to transfer of lands into private ownership;

- Impacts to threatened, endangered and sensitive species in the Las Vegas Valley as a result of development of the Federal lands subsequent to the land exchange; and

- Impacts to cultural resources in the Las Vegas Valley as a result of development of the Federal lands subsequent to the land exchange.

1.5 RELATIONSHIP TO STATUTES, REGULATIONS AND OTHER PLANS

The following Federal legislation provides for land exchanges and withdrawals such as those proposed and are, therefore, pertinent to this action:

- National environmental Policy Act (NEPA)
- Federal Land Policy Management Act (FLPMA)
- Federal Land Exchange Facilitation Act (FLEFA)

The guiding management document for the Stateline District of the BLM is the RMP. The proposed action is in conformance with the RMP.

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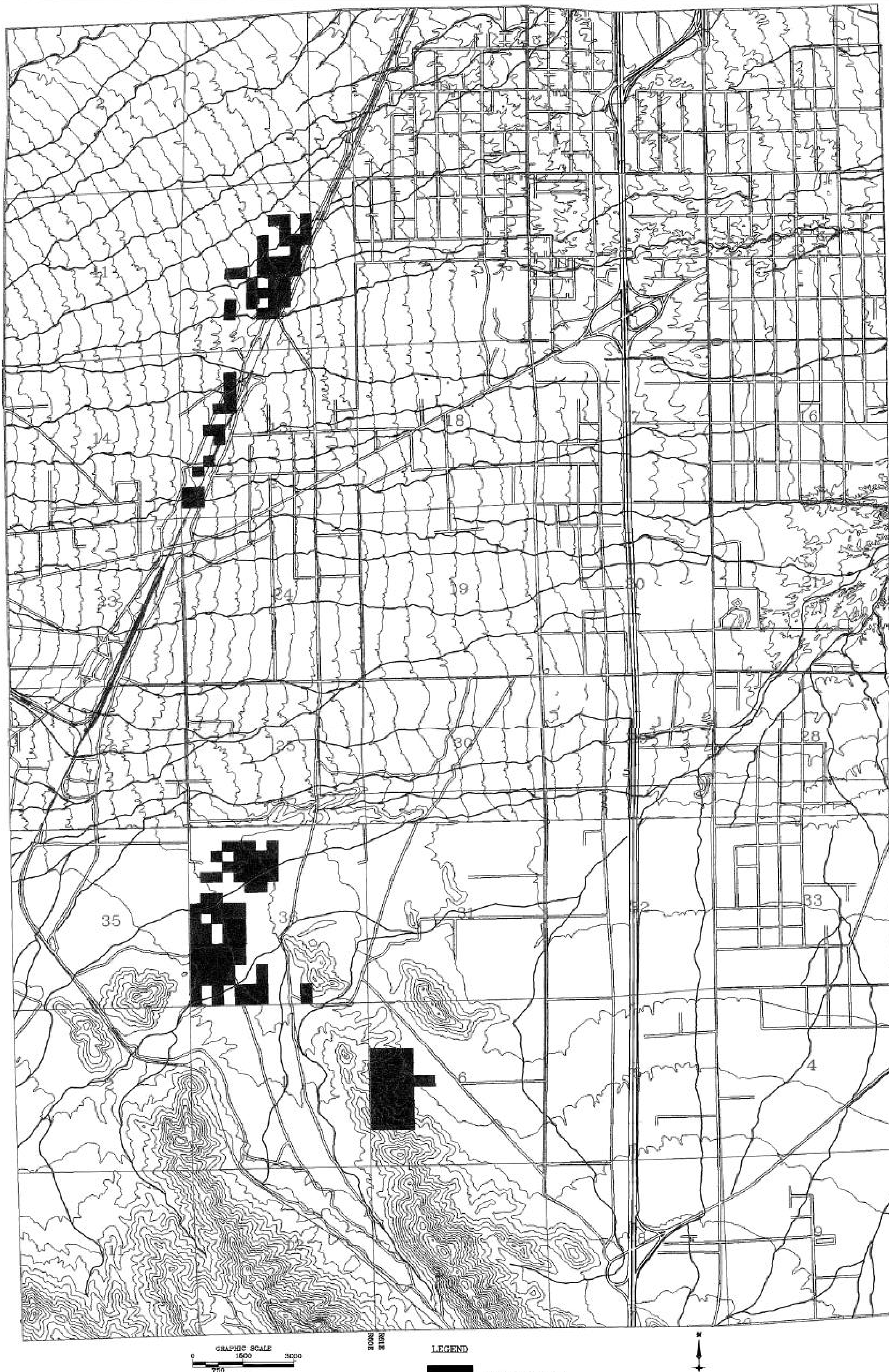

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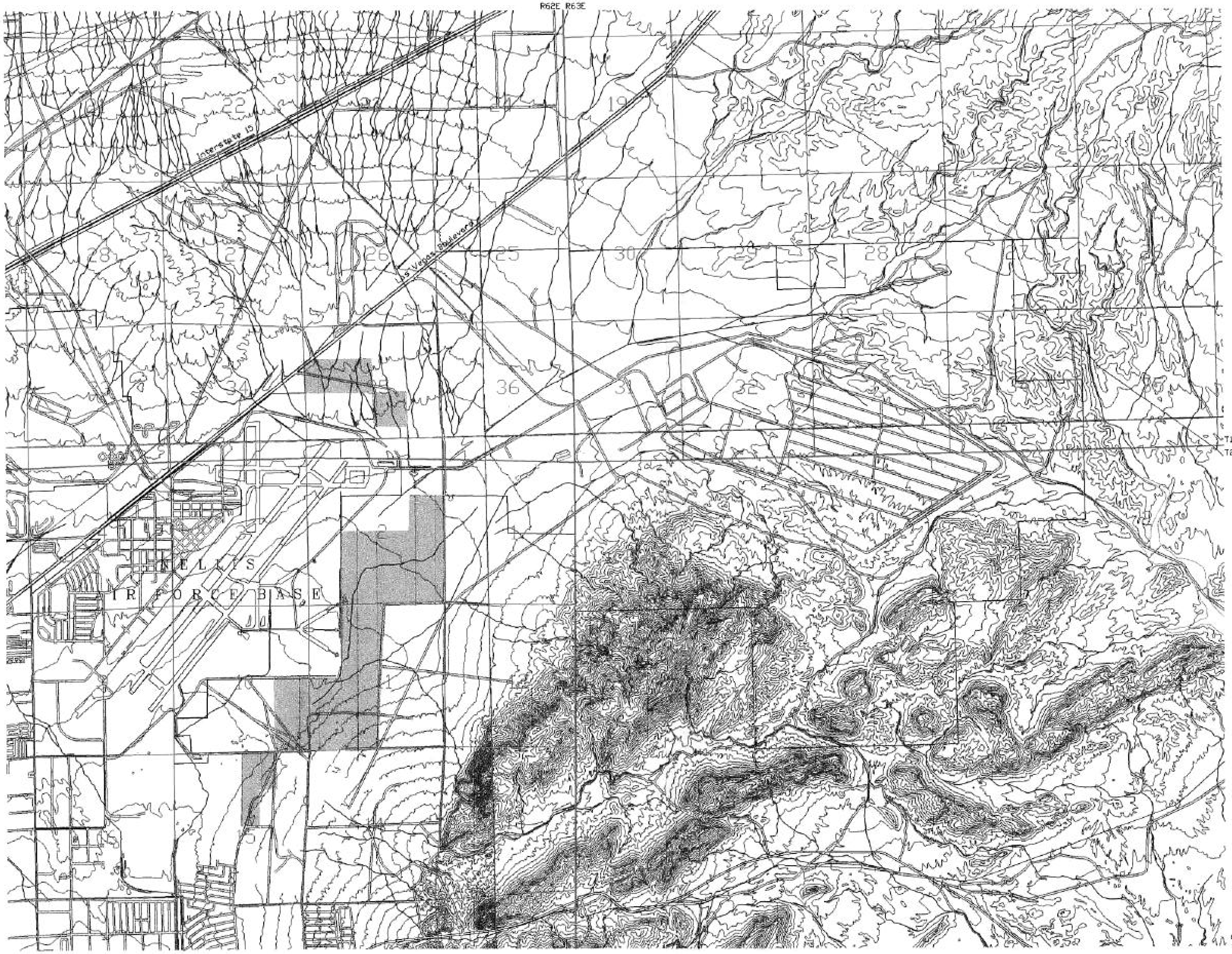

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NON-FEDERAL LANDS

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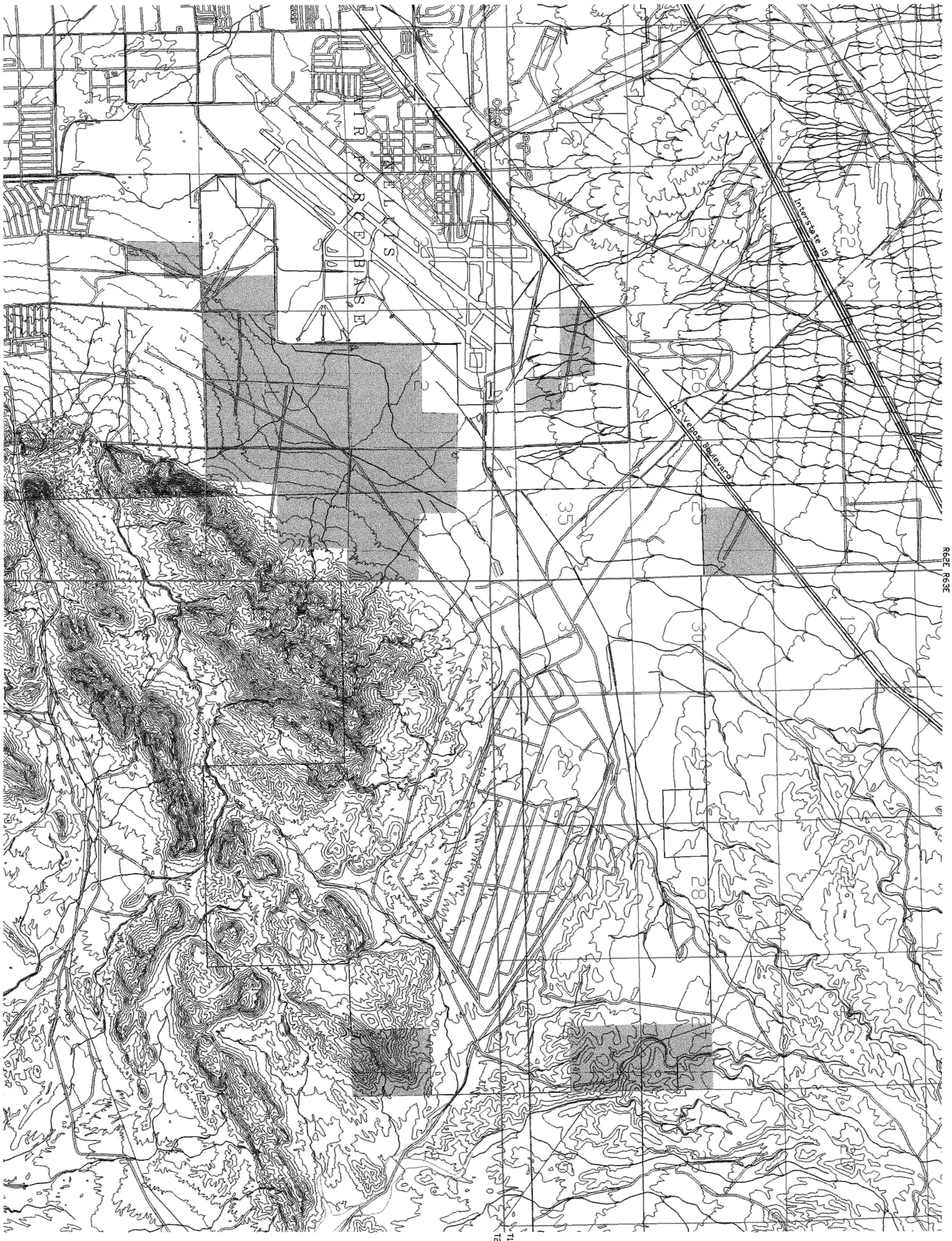

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NELLIS WITHDRAWAL LANDS

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CHAPTER 2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This chapter describes the alternatives considered by the BLM, including the Proposed Action, and summarizes the environmental consequences of each alternative. The purpose of Chapter 2 is to sharply define the differences between the alternatives and how their impacts on the affected environment differ, and specifically how each alternative addresses the important impacts described in Chapter 1. Five alternatives, including the Proposed Action, and the No Action alternative were considered. However, three of the alternatives were eliminated from further analysis for reasons stated in the following section. Therefore, only the Proposed Action and the No Action alternative will be fully analyzed in this environmental assessment. The five alternatives cover a range of reasonable alternatives and no other alternatives were considered.

2.1 ALTERNATIVES ELIMINATED FROM FURTHER ANALYSIS

2.1.1 Multiple Transaction Land Exchange

This alternative would be similar to the proposed action, except that the disposal and acquisition of lands by the BLM would occur in several separate, smaller land exchanges. The impacts to the environment would be the same as for the proposed action. This alternative was eliminated from further analysis due to its being less efficient and cost effective.

> *"Federal parcels available for exchange usually consist of numerous parcels of limited value. These parcels frequently cannot be exchanged in individual transactions since the value of each individual parcel usually does not warrant the expense of conducting a land exchange. By combining several parcels into an assembled land exchange, processing becomes more efficient and cost effective."* (USDI, 1994)

2.1.2 Disposal of Lands Through a Land Sale

Section 203 of FLPMA allows for the disposal of Federal lands through public sale. The impacts to the environment of the Federal lands would be the same as for the proposed action. However, an Interim Report on FLPMA (USDI, 1977) states the following:

> *"In evaluating the potential disposal of tracts identified during the public sale screening phase, field offices are encouraged to consider an exchange under section 206 of FLPMA. Through this means, resource management programs may be enhanced through consolidation of land areas."*

Disposal of the Federal lands through a land sale would prevent the timely and cost effective acquisition of the 760 acres of non-Federal lands required to meet the Federal government's objective to promote pubic health and safety by complying with Department of Defense Directive 6055.9. Therefore, this alternative was eliminated from further analysis in this EA.

2.1.3 Land Exchange and Withdrawal of Non-Federal Lands

This alternative would be similar to the proposed action except that the withdrawal of lands to Nellis AFB would be limited to the non-Federal lands. The withdrawal of the additional 1,700 acres of Federal lands would either occur as a separate action or would not occur at all. The impacts to the Federal and non-Federal lands would be the same as for the proposed action. This alternative was eliminated from further analysis because it would not comply with the procedural requirements of FLPMA and NEPA, and would not meet the objective of the proposed action: to ensure public health and safety and maintain air and ground crew readiness and live ordinance training programs at Nellis AFB pursuant to Department of Defense Directive 6055.9.

2.2 PROPOSED ACTION

The Proponent and the BLM would agree to a land exchange involving the transfer of approximately 605 acres of Federal lands in the southeast portion of the Las Vegas Valley to the Proponent in exchange for approximately 760 acres of non-Federal lands located adjacent to Nellis AFB in Clark County. The exact acreage of Federal and Non-Federal lands to be exchanged will be determined once appraisals on all the lands are approved by the BLM. Upon transfer of the non-Federal lands to Federal stewardship, the non-Federal lands would be withdrawn to the Air Force for inclusion into the boundaries of Nellis AFB along with an additional 1,700 acres of Federal lands currently managed by the BLM in accordance with Section 204 (D) of FLPMA. A description of the Federal lands, non-Federal lands, and Federal withdrawal lands is provided below.

2.2.1 Federal Lands

The Federal lands consist of approximately 605 acres of land located in the Las Vegas Valley, Clark County, Nevada. This includes approximately 215 acres located in T. 22 S., R. 61 E., sec 32 that were included in EA NV-056-98-076 for Phase 1. These lands consist of several blocks of public lands interspersed with private lands. Current development on the private lands has made management of the Federal lands difficult. Vegetation on the Federal land is sparse and is typical of Mojave desert scrub. Current use of the Federal lands is for dispersed recreational purposes. Once transferred to private ownership, the lands would be used for community expansion and development.

2.2.2 Non-Federal Lands

The non-Federal lands consist of several parcels totaling approximately 760 acres located adjacent to Nellis AFB in Clark County, Nevada. Vegetation on the non-Federal land is sparse and is typical of Mojave desert scrub. All of the non-Federal parcels are located within the LOLA QD arc for the evacuation zone and some are within the QD arc for the safety zone at Nellis AFB. Once transferred to Federal stewardship, the lands would be withdrawn to Nellis AFB for inclusion into their boundary. The lands would be used by Nellis AFB as a permanent buffer zone for the LOLA to ensure public safety and maintain air and ground crew readiness and live ordinance training programs.

2.2.3 Federal Withdrawal Lands

The Federal withdrawal lands consist of approximately 1,700 acres of lands currently managed by the BLM, Stateline District located adjacent to Nellis AFB in Clark County, Nevada. Vegetation on the Federal land is sparse and is typical of Mojave desert scrub. Current use of the Federal withdrawal lands is for dispersed recreational purposes. These lands consist of several blocks of lands located within the LOLA QD arc for the evacuation zone and/or the QD arc for the safety zone. Once withdrawn to Nellis AFB, the lands would be included within the boundary and used as a buffer zone to ensure public safety and maintain active ground crew readiness and live ordinance training programs.

2.3 NO ACTION ALTERNATIVE

Under the No Action Alternative the land exchange would not occur. Approximately 760 acres of non-Federal lands adjacent to Nellis AFB would remain in private ownership. Land use would continue to be subject to the discretion of the landowner, and State and County laws and ordinances. Nellis AFB would be unable to meet the requirements set forth by Department of Defense Directive 6055.9. None of the non-Federal lands would be utilized as a buffer zone to ensure public safety and to allow Nellis AFB to maintain active ground crew readiness and live ordinance training programs.

The 605 acres of Federal lands in the southwest portion of the Las Vegas Valley would remain under the jurisdiction of the BLM Las Vegas District, and would be subject to management policies outlined in the RMP. Approximately 1,700 acres of Federal lands currently managed by the BLM would not be withdrawn to the Air Force for inclusion into Nellis AFB.

CHAPTER 3.0 AFFECTED ENVIRONMENT

The following chapter describes the environmental resources on the non-Federal, Federal, and Federal withdrawal lands which may be impacted by either the Proposed Action or No Action alternative. All of the lands included in the Proposed Action are located in the Las Vegas Valley. The Federal lands (approximately 605 acres) are located in the southwest portion of the Las Vegas Valley. The affected environment for the Federal lands in T. 22 S., R. 61 E., sec 32 for the Proposed Action and No Action are addressed on pages 3-1 to 3-25 in "*Environmental Assessment Volkmar Land Exchange*" (NV-056-98-076); these elements are incorporated by reference. The non-Federal lands (approximately 760 acres) and the Federal withdrawal lands (approximately 1,700 acres) are located adjacent to Nellis AFB in the northeast portion of the Las Vegas Valley. The environmental resources are similar for all of the lands included in the proposed action, and therefore are presented together in the following sections. In cases where the environmental resources differ between the Federal, non-Federal, or Federal withdrawal lands, the sections are clearly divided to show these differences.

3.1 FEDERAL, NON-FEDERAL, AND FEDERAL WITHDRAWAL LANDS

3.1.1 Resources Not To Be Impacted

The following critical elements of the human environment are either not present on the lands or would not be affected by the Proposed Action or the No Action alternative in this EA:

- Areas of Critical Environmental Concern (ACECs)
- Farm Lands (Prime or Unique)
- Floodplains
- Native American Religious Concerns
- Wetlands/Riparian Zones
- Wild and Scenic Rivers
- Wilderness

Specialists have further determined that the following resources, although present in the action area, are not affected by the Proposed Action or the No Action alternative:

- Natural Resources
- Socio-Economics

3.1.2 Geology and Soils

The soils on the Federal, non-Federal, and Federal withdrawal lands are comprised of Quaternary Alluvium. Alluvium is the term applied to unconsolidated materials that differ widely in character and origin (Longwell, et al., 1965). Alluvial soils are generally stabilized from wind and water erosion by the native vegetation. There are no distinct geological formations on the Federal, non-Federal, or Federal withdrawal lands.

3.1.3 Minerals

Federal Lands

The Federal lands are underlain by Quaternary-age alluvium containing gravel, sand, silt, and clay. The conclusions of the Mineral Potential Report prepared for the Federal lands (USDI, 1998) indicate the mineral potential for the Federal lands are as follows: 1) natural deposits of locatable minerals are not present in sufficient quantities or quality to render the lands valuable for these minerals; 2) the lands are considered potentially valuable for oil, gas, and compounds of potassium and sodium, but the likelihood of discovery of these products is low, and; 3) the lands are not considered valuable for other leasable or geothermal resources.

Non-Federal and Federal Withdrawal Lands

The Federal withdrawal lands and non-Federal lands are generally underlain by Quaternary-age alluvium containing gravel, sand, silt, and clay. However, lands located north and west of Sunrise Mountain are composed of either the Muddy Creek Formation which is Tertiary in age and is composed of flat-lying coarse to fine-grained sedimentary rocks or the Rogers Spring, Muddy Creek, and Callville Limestones, which are Devonian to Permian in age. The conclusions of the Mineral Potential Report prepared for the Federal withdrawal lands and non-Federal lands (USDI, 1998) indicate the mineral potential for those lands is as follows: 1) natural deposits of locatable minerals are not present in sufficient quantities or quality to render the lands valuable for these minerals; 2) the lands are considered potentially valuable for oil, gas; and have low to moderate potential for compounds of sodium; 3) the lands are not considered valuable for other leasable or geothermal resources.

Mineral activity in the Las Vegas Valley is generally limited to non-locatable sand and gravel operations. Mining claims occurring on the Federal lands are listed in the aforementioned Mineral Potential Reports located in the land exchange case file at the BLM Las Vegas District Office.

The Mineral Potential Reports that describe existing minerals and mining activity on the Federal, non-Federal, and Federal withdrawal lands for the Proposed Action are available for review in the BLM case file for this exchange. A potential for sand and gravel was determined to exist, however

it is recommended that sand and gravel be reserved to the United States. Historically, only sand and gravel have been extracted from BLM lands in the Las Vegas Valley.

3.1.4 Air Quality

The Clean Air Act of 1987 required that the carbon monoxide (CO) standard be attained in all metropolitan areas by the end of 1987. Clark County is failing significantly to meet district and Federal air quality standards for CO within the Las Vegas Valley.

Regarding off-site air quality effects, the United States Supreme Court in the case of Robertson vs. Methow Valley Citizens Council 490 US 332 (1989) ruled:

> *"In this case, the off site effects on air quality...cannot be mitigated unless non-Federal governmental agencies take appropriate action. Since it is those state and local governmental bodies that have jurisdiction over the authority to mitigate them, it would be incongruous to conclude that the [Forest Service] has no power to act until the local agencies have reached final conclusion on what mitigating measures they consider necessary."*

In July of 1987, the Environmental Protection Agency (EPA) promulgated National Ambient Air Quality Standards (NAAQS) for particulate matter with an aerodynamic diameter equal to or less than 10 microns (PM_{10}). The Las Vegas Valley has been categorized as a Group One Area for having a 95% non-attainment probability; as a result, the EPA has designated the Valley as being in serious non-attainment of PM_{10}. An estimated 95% of total PM_{10} emissions have been attributed to fugitive dust. Windblown fugitive dust is the primary source of suspended particulates in Clark County. Primary sources are construction activities, unpaved roads, cleared areas and natural areas. Secondary sources include vehicle exhaust, fireplaces, natural gas, vehicle brakes and tire wear.

The Clark County Air Pollution Control Division (APCD) has identified all study areas within the Las Vegas Valley, with the exception of Boulder City, as non-attainment (exceeded Division standards) for CO and total suspended particulates (TSPs). TSPs are particulate matter including dust, soot, dirt, smoke and aerosols. Because the entire Las Vegas Valley is currently designated non-attainment, the APCD treats Boulder City as if it was not in attainment and any activities expected to increase fugitive dust or combustion particulate emissions are considered potentially significant.

Nitrogen dioxide (NO_2) and Volatile Organic Compound (VOC) levels are also serious concerns due to the direct role these compounds play in ozone formation. Ozone has been in compliance with the District and Federal standards but at levels only slightly below the NAAQS. The EPA is considering introducing more stringent ozone NAAQS.

3.1.5 Water Resources

Water resource information is derived from Section 6 of the Clark County Regional Flood Control District EIS, 1990.

The Las Vegas Valley is an alluvial basin filled with a complex sequence of interspersed deposits of boulders, gravels, sands, silts and clays and contain three general aquifer systems. Shallow aquifers are defined as being zero to 50 feet below ground surface (BGS) where ground water is within 20 feet of the surface. Near-surface reservoir is defined as being zero to 200 feet below the water table where the water table is greater than 20 feet BGS. Principal aquifers are generally located 200 feet or more BGS (USDI, 1990).

Shallow aquifers generally flow to the southeast and discharge into the Las Vegas Wash and its tributaries. The water quality of these shallow aquifers is generally poor due to high concentrations of Total Dissolved Solids (TDS). The volume of water from urban runoff and landscape irrigation has increased significantly as a result of extensive development in Las Vegas and is the primary source of recharge for the shallow aquifers. The poor quality water from the shallow aquifer has the potential to migrate down to the near-surface reservoir and the principal aquifer, thereby degrading the water quality of those aquifers. Water from the shallow aquifer is not used as a source of potable water (USDI, 1990).

The movement of ground water in the near-surface reservoir is generally to the east; however, water movement through the unit is believed to be small due to low transmissivity of the sediments (Malmberg, 1965). The water quality of the near-surface reservoirs is also considered to be poor. High concentrations of nitrates have been discovered in water samples from the near-surface reservoirs. The nitrate concentrations are believed to be from natural mineral sources in some areas of the valley, but are also associated with waste disposal in other parts of the valley. Additionally, high concentrations of TDS and chloride which exceed EPA drinking water standards have been found in the near-surface reservoirs. Currently, the principal sources of recharge to the near-surface reservoir are irrigation, septic tank and sewage treatment plant effluents, industrial effluent ditches and disposal ponds and infiltration from shallow aquifers (USDI, 1990).

Groundwater in the principal aquifers generally flows southeast in the northwestern portion of the Las Vegas Valley. Flows in the southwestern portions of the valley are to the east and south. The principal aquifer system is comprised of a shallow, middle, and deep zone. Prior to 1940, the shallow zone was the principal source of groundwater in the valley. However, the middle zone is currently the primary source. Groundwater quality in the principle aquifer generally becomes poorer to the south where it contains mixed-cation sulfate type water. The potential exists for the quality of water in the principal aquifer to decrease as a result of infiltration of poor quality water

in the overlying aquifers. Recharge to the principal aquifer is primarily a result of precipitation in the surrounding mountain recharge areas (USDI, 1990).

Due to the aridity of the area, surface water in the Las Vegas Valley is primarily ephemeral. Precipitation is infrequent and totals an average of 4.4 inches per year. Drainage patterns in the valley are complex due to the alluvial nature of the soil; however, most surface drainage eventually feeds into Lake Mead via the Las Vegas Wash. The water quality of storm water runoff is generally poor due to the influence of human activities. Storm water runoff may be degraded by sewage effluent; however, the storm water may help to dilute the effluent (USDI, 1990).

Water is supplied to Clark County by the Las Vegas Valley Water District (LVVWD) and is able to meet the demands of the growing metropolitan area. However, it is anticipated that new sources of water may be required in the near future. Currently, the LVVWD has water delivery lines in or under construction which could service the Federal lands.

3.1.6 Biological Resources Including Threatened, Endangered and Sensitive Species

The vegetation on the Federal, non-Federal, and Federal withdrawal lands consists of those species associated with the creosote bush-white bursage community which is a component of the Mojave Desert Scrub Biome. The creosote-white bursage community is composed of shrubs, succulents, and ephemeral vegetation that grows close to the ground and is dominated by creosote bush (*Larrea tridentata*).

Wildlife species occurring on the Federal, non-Federal, and Federal withdrawal lands are associated with the Mojave Desert Scrub biome. Due to the generally harsh environment of the Mojave Desert, wildlife species densities and diversity are low.

Based on information from Federal and State resource agencies, the following species of concern were identified as being potentially present on the Federal, non-Federal, or Federal withdrawal lands. For more detailed information on these species and their habitats, the Biological Assessments can be reviewed in the land exchange case file at the BLM Las Vegas District office.

Table 3.1 TE&S PLANT AND WILDLIFE SPECIES KNOWN TO OCCUR WITHIN 10 MILES OF THE FEDERAL LANDS

Common Name	Scientific Name
Las Vegas Bear Poppy	*Arctomecon californica*
Yellow Twotone Beardtongue	*Penstemon bicolor* ssp. *bicolor*
Three Corner Milkvetch	*Astragalus geyeri* var. *triquetrus*
Sticky Ringstem	*Anulocaulis leiosolenus*
Large Flowered Sunray	*Enceliopsis argophylla* var. *grandiflora*
Mojave desert tortoise	*Gopherus agassizii*
Western burrowing owl	*Athene cunicularia hypugea*
Western Chuckwalla	*Sauromalus obesus obesus*
Banded Gila Monster	*Heloderma suspectum*
Spotted Bat	*Euderma maculatum*
Greater Mastiff Bat	*Eumops perotis californicus*
Small-Footed Myotis	*Myotis ciliolabrum*
Big Free-Tailed Bat	*Nyctinomops macrotis*
Pale Townsend's Big-Eared Bat	*Plecotus townsendii pallescens*

3.1.6.1 TE&S Plant Descriptions

Las Vegas Bear Poppy (*Arctemecon californica*)

The Las Vegas bear poppy is a perennial herb and stands approximately 20 to 50 centimeters in height. It has yellow flowers and leaves that are generally wedge-shaped with rounded teeth. Seeds are few and are oblong, wrinkled and black (Clark, 1993). This species is State listed as critically endangered and Federally designated as a species of concern.

The Las Vegas bear poppy is endemic to the Mojave Desert. Major populations can be found in the Las Vegas Valley on gypsum soils associated with the Colorado River drainage. General habitat for the Las Vegas bear poppy can be found in gypsum soils of creosote bush-bursage, salt desert scrub, and mojave mixed scrub communities (RECON, 1997).

Vegetation on gypsum soils is often sparse or barren (CCDCP, 1987) with many of the plant taxa present, including the Las Vegas bearpoppy, being specially adapted and therefore restricted to them.

No individuals of the Las Vegas bear poppy were observed on any of the Federal, non-Federal or Federal withdrawal lands. However, this species has been observed on the Federal withdrawal lands in T. 19 S., R. 63. E., sec. 27 in the past. Therefore, there is the potential for this species to occur on Federal withdrawal lands in T. 19 S., R.63 E., sec. 27 & 34 and T. 20 S., R 63 E., sec. 3 since suitable habitat exists. It is difficult to determine the current extent of this species due to its seasonal nature and generally short germination periods.

Yellow Twotone Beardtongue (*Penstemon bicolor ssp. bicolor*)

The Yellow twotone beardtongue is a perennial that stands up to 120 centimeters in height. Its stem is thick with smooth, leathery leaves that are irregularly toothed. The plant bears light yellow flowers which may be somewhat grandular pubescent within and "are usually sparsely long-pubescent across the base of the lobes of the lower lip" (Mazingo and Williams, 1980). This species is listed as a Federal species of concern.

The yellow twotone beardtounge is endemic to southern Nevada, and is generally found in creosote bush-bursage and Mojave mixed scrub communities. This species prefers rocky outcrops, shallow gravelly washes and wash slopes, road sides, and occurs at elevations between 2,000 and 5,500 feet (RECON, 1997).

Habitat for the yellow twotone beardtongue occurs on all of the Federal, non-Federal and Federal withdrawal lands. Individuals of this species were observed on the non-Federal lands and the Federal withdrawal lands located west of Sunrise Mountain in 19 S. R. 62 E., sec. 25 & 35, and T. 20 S., R. 62 E., sec. 1, 2, 10, 11, 12, & 15.

Three Corner Milkvetch (*Astragalus geyeri var. triquetrus*)

The three corner milkvetch is an annual plant with small white flowers. The plant's seed pods are oblong and somewhat flattened with an oblong grove on the lower side. The leaves are 3 to 5 centimeters long and produce an average of nine elliptical leaflets (Mozingo and Williams, 1980). This species is a Federally listed species of concern.

The three cornered milkvetch is endemic to the southeastern Mojave Desert and generally occurs in Clark County, Nevada on unconsolidated and stabilized dunes adjacent to Lake Mead and its tributary valleys as well as on gypsum soils. This plant prefers average to above-average rainfall for maximum germination (RECON 1997).

No individuals of this species were observed on any of the Federal, non-Federal or Federal

withdrawal lands. However suitable habitat for the three cornered milkvetch does occur on Federal withdrawal lands located to the east of Nellis AFB in T. 19 S., R. 63 E., sec. 27 &34, and T. 20 S., R. 63 E., sec. 3.

Sticky Ringstem (*Annulocaulis leiosolenus*)

The sticky ringstem is a perennial plant approximately 60 to 100 centimeters in height. The leaves are approximately 3.5 to 15 centimeters in length (Kartesz, 1998). This species is a Federally listed species of concern.

The sticky ringstem is endemic to the southwest United States with its distribution in Clark County, Nevada being primarily in the Frenchman and Sunrise Mountain area east to the Muddy Mountains. Habitat for this species are the creosote bush-bursage and salt brush vegetation communities and is generally limited to soils with high gypsum content on rolling hills and terraces (RECON, 1997).

No individuals of the sticky ringstem were observed on any of the Federal, non-Federal or Federal withdrawal lands. However, suitable habitat does exist on the Federal withdrawal lands located on the east side of Nellis AFB in T. 19 S., R. 63 E., sec. 27 & 34, and T. 20 S., R. 63 E., sec. 3.

Large Flowered Sunray (*Enceliopsis argophylla var. grandiflora*)

The large flowered sunray is a perennial plant approximately 10 to 40 centimeters in height. The leaves have fine grayish-white hairs and are relatively small. The leafless flower stalks bear flowers with disks approximately 2 to 3.5 centimeters across. The flowers themselves have yellow coronas and usually number in the range of 11 to 23 (Mozingo and Williams, 1980).). This species is a Federally listed species of concern.

The large flowered sunray is endemic to the Mojave Desert, with its distribution in Clark County primarily in the Las Vegas Valley and drainages adjacent to Lake Mead. Habitat for this species includes clay and gypsum cliffs and gravelly slopes (RECON, 1997).

No individuals of the large flowered sunray were observed on any of the Federal, non-Federal or Federal withdrawal lands. However, suitable habitat does exist on the Federal withdrawal lands located on the east side of Nellis AFB in T. 19 S., R. 63 E., sec. 27 & 34, and T. 20 S., R. 63 E., sec. 3.

3.1.6.2 TE&S Wildlife Descriptions

Mojave desert tortoise *(Gopherus agassizii)*

Size and Appearance

Desert tortoises are members of the family Testudinidae. An adult desert tortoise has a domed carapace and relatively flat, unhinged plastron (ventral portion of shell). The shell comprises an epidermis of keratinous scales over bony dermal plates; the ribs and vertebrae are fused to the carapace. Shell color is brownish, with yellow to tan scute centers and mottling on the plastron (Stebbins, 1954). The forelimbs are adapted for burrowing, with laterally-extended limbs and flattened feet, enlarged and horny scales, and broad nail-like claws. Rear legs are rounded and elephantine. The head is rounded in the front and has a blunt, horny beak; eyes have greenish irises. Skin unprotected by horny plates is thin and easily penetrated. Males are distinguished from females by a rounded posterior carapace, a longer up curved gular plates on the anterior portion of the plastron, enlarged chin glands, a concave posterior plastron, as well as longer tail.

Adult desert tortoises range in diameter from 9.25 to 14.5 inches (23.5 to 36.8 cm). Hatchlings are about the size of a silver dollar, 1.4 to 1.8 inches long (36 to 45 mm) and resemble adults except their shells are spongy and pale and their eyes more gold (Stebbins, 1954). At approximately five years of age (about 3 inches [80 mm] in length), their shells have hardened considerably. Epidermal scales, or scutes, form conspicuous growth annually, which wears away due to abrasion with soil and rocks. Shells of old tortoise are smooth and somewhat concave in the scute centers. The BLM has categorized tortoise size based on length using the following classes: hatchlings and very young tortoises (4 inches), juveniles (4 to 7 inches), sub-adults (7 to 8.5 inches) and adults (>8.5 inches). These classes, while commonly used, are artificial. For example, breeding-age tortoises may be classed as sub-adults due to their size even though they have reached sexual maturity.

Habits

Although exact age has been impossible to verify in the wild, the life span of an adult tortoise is estimated to be 50 to 100 years. Mortality is highest among hatchlings and juveniles decreasing with size and shell ossification.

The age structure of stable tortoise populations is not known and is difficult to assess. Hatchlings and juveniles are difficult to detect and are believed to have significantly higher mortality rates than adult tortoise. Desert tortoise are considered a K-selected species, meaning they have a low birthrate, low recruitment of juveniles into the breeding population, low mortality in older age categories, and a low population turnover rate. As a result, the number of adults may remain

constant for relatively long periods, during this time the ratio of adults to other age groups may vary. Second to the number of breeding adults, juveniles likely to join the adult population is a critical component of a stable population. However, the ratio of adults to juveniles is unknown among local tortoise populations. Therefore, assessing population dynamics is difficult.

Desert tortoise activity is seasonal, with peak active periods occurring in the spring between late March and early June, when ambient temperatures are moderate. As the temperature rises, the annual vegetation begins to become scarce and the tortoise retreats underground to escape the extreme heat. During the summer, tortoises may emerge in the early morning and late evening to forage. Tortoises also emerge from their burrows when precipitation occurs. A second peak in activity may occur in the late fall when temperatures once again are moderate. Tortoises will continue to forage until cold weather necessitates the protection of their burrows. Winter burrows are generally deeper than summer cover sites, and several tortoises have been documented occupying a single winter burrow at the same time.

Tortoise densities are generally highest in the creosote-white bursage community at lower elevations. However, less dense populations occur in the higher elevation blackbrush community. Suitable habitat does exist for this species.

Western burrowing owl *(Athene cunicularia hypugea)*

Size and Appearance
Western burrowing owls are members of the family Strigidae. Average size is approximately nine and one-half inches in height and its long legs distinguish it from all other owls. The adult is boldly spotted and barred, while juveniles are buff in color (Scott, 1987).

Habits
These owls prefer open country, but are also found in areas of human habitation including golf courses, road cuts, and airports. Burrowing owls are active during daylight and night hours. Diet consists primarily of lizards, rodents, and occasionally insects. Nesting commonly occurs in small colonies in mammal burrows that have been enlarged by kicking dirt backward. Nests are usually lined with cow chips, horse dung, food debris, dry grass, weeds, pellets, and feathers. Females remain inside the burrow during most of the egg laying and incubational periods and will be fed by the male throughout brooding. The female will begin to forage when the young are three to four weeks old. At two to four weeks after the young emerge, a new burrow is often chosen. On average, chicks are fledged during September (Ehrlich et al., 1982).

Suitable Western burrowing owl habitat was observed on Federal, non-Federal, and Federal

withdrawal lands.

Western Chuckwalla *(Sauromalus obesus obesus)*

Size and Appearance
A member of the family Iguanidae, the Western Chuckwalla is a large, pot-bellied, dark-bodied lizard with loose folds of skin around its neck and shoulders. The back is covered with small, granular scales. The tail is thick and blunt at the tip. Average length is five and one-half to eight inches (13.7 to 20 cm). The head, chest, and limbs of adult males are usually black and are sometimes spotted and flecked with pale gray. The rest of the body is usually red or light gray depending on the age and locality. Adult males at some localities have considerable red coloring on the body, and when present, three to five dark tail bands alternate with two to four light bands; the end of the tail is usually light colored. Females tend to retain juvenile cross bands (Stebbins, 1985).

Habits
Diurnal in habit, the chuckwalla is rock-dwelling, herbivorous lizard, widely distributed throughout the Creosote Scrub Community. It is usually found on lava flows, rocky hillsides and outcrops that provide shelter and basking sites. When disturbed, chuckwallas distend their body wedging themselves tightly between rock crevices. Diet consists of a variety of desert annuals, perennials, and occasionally insects (Stebbins, 1985). Eggs are laid from June to August with clutches normally consisting of 5 to 16 eggs.

Suitable habitat of the chuckwalla is present on approximatley 80 acres of the Federal lands in T. 23 S., R. 61 E., sec. 6..

Banded Gila Monster (*Heloderma suspectum cinctum*)

Banded gila monster is a member of the family Helodermatidae. They average approximately 13 to 18 inches in length and have heavily built cylindrical bodies. Their bodies, tails and legs are covered with scales which change to plates on the underside. Color is generally orange and black or brown with bands on the back (Zoological Society of Philadelphia, 1997).

Little is known about the habits of the gila monster as this species spends the majority of its life, approximately 95%, underground. Gila monsters prefer areas of heavy brush to more easily conceal themselves. Rocky washes and canyons bottoms are favorite habitats. Gila monsters lay eggs and the young are born in the spring. The young emerge from their eggs capable of fending for themselves (Harry Reid Center, 1998). Gila monsters feed on small mammals, eggs, lizards, and

insects (Stebbins, 1985).

Suitable Banded gila monster habitat was observed on Federal, non-Federal, and Federal withdrawal lands.

Spotted Bat (*Euderma maculatum)*

Spotted bats are members of the family Vespertilionidae. Spotted bats are 107 to 155 mm in length, with a forearm length between 48 and 51 mm. Their ears are almost 51 mm in length. The bats are dark sepia colored with a white spot at the base of the tail and another on each shoulder (Whitaker, 1980; Burt and Grossenheider, 1976).

This is one of the rarest bats that can be found in arid regions of the southwest. The spotted bat holds it's huge ears forward while in flight and gives of a loud, high-pitched call. It feeds almost entirely on moths. Spotted bats are relatively solitary, but sometimes hibernate in small clusters (Whitaker, 1980).

Although little is known about this bat species, it apparently prefers to roost in crevices in rocky cliffs and canyons. It will sometimes enter buildings and caves near water.

No suitable roosting habitat occurs on any of the Federal, non-Federal or Federal withdrawal lands. However, some or all of the lands may be utilized for foraging by this species.

Greater Western Mastiff Bat (*Eumops perotis californicus*)

The Greater Western Mastiff bat is a member of the family Molossidae and is the largest bat in North America. It is approximately 140 to 185 mm in length, with enormous ears (25-40 mm) that are jointed at the base and protrude over the forehead. Its body is sparsely furred, with dark brown hairs that are white at the base (Whitaker, 1980).

By day, the mastiff bat forms small colonies of usually fewer than 100 members. Because of their large size and long wings, they require considerable space to launch themselves into flight, so roosting sites are usually situated to permit a free downward fall for at least 10 feet. To enter roost crevices, bats sweep into long vertical slots at least two inches wide, then climb rapidly to wedge themselves into a narrow spot. As night approaches, loud squeaks may be heard near the entrance. During flight, cries are frequent and can be heard from more than 1,000 feet away. The bats feed primarily on moths, but will also eat ground-living crickets and long-horned grasshoppers (Whitaker, 1980).

This bat prefers to roost in crevices in rocky canyons. It will, however, also roost in buildings, trees, and mine tunnels (Burt and Grossenheider, 1976).

No suitable roosting habitat occurs on any of the Federal, non-Federal or Federal withdrawal lands. However, some or all of the lands may be utilized for foraging by this species.

Small-Footed Myotis (*Myotis ciliolabrum*)

The small-footed myotis bat has a slightly smaller foot than other members of the genus Myotis. Forearm length is between 30 and 36 mm; total body length is between 71 and 82 mm, and weighs from six to nine grams. The fur is glossy and light tan to golden brown above and buff to nearly white below. The wings and interfemoral membrane are dark brown (Whitaker, 1980).

Little is known about this species except that it has been found beneath rock slabs and in crevices.

No suitable roosting habitat occurs on any of the Federal, non-Federal or Federal withdrawal lands. However, some or all of the lands may be utilized for foraging by this species.

Big Free-Tailed Bat (*Nyctinomops macrotis*)

The big free-tailed bat has a body length of approximately 129-144 mm and a forearm length of 58-64 mm. The fur is reddish-brown, dark brown, or black with white hairs at the base. Ears are joined at the base and extend beyond the tip of the nose when laid forward (Whitaker, 1980).

This bat is found in rocky areas and roosts during the day in rocky cliffs. Their diet consists primarily of moths, but they will also feed on crickets, grasshoppers, ants, and other insects. This bat emerges late at night to feed and sometimes chatters loudly when feeding.

No suitable roosting habitat occurs on any of the Federal, non-Federal or Federal withdrawal lands. However, some or all of the lands may be utilized for foraging by this species.

Pale Townsend's Big-Eared Bat (*Plecotus townsendii pallescens*)

Pale Townsend's big-eared bat is a member of the family Vespertilionidae. The bats are 89 to 110 mm in length, with a forearm length of 39 to 47 mm. Their ears are 31 to 37 mm long and extend to the middle of the body when laid back. Two prominent bumps are present on the nose in front of the eyes. Coloration of these bats varies from clove-brown to pale gray above, with the bases

of ventral hairs being gray or brown and the tips being brown or buffy (Whitaker, 1980; Burt and Grossenheider, 1976).

These bats are colonial in nurseries and during hibernation, but may be solitary during other parts of the year. They will move from cave to cave even during the coldest months of the year. This species of bat emerges from daytime roosts late at night to feed almost entirely on moths (Whitaker, 1980; Burt and Grossenheider, 1976).

These bats utilize caves, mine tunnels and buildings for daytime roosts (Burt and Grossenheider, 1976).

No suitable roosting habitat occurs on any of the Federal, non-Federal or Federal withdrawal lands. However, some or all of the lands may be utilized for foraging by this species.

3.1.7 Cultural Resources

Federal Lands

A Class III cultural resource survey was conducted during January and February of 1996 on approximately 3,897 acres of federally-owned lands by Lone Mountain Archaeological Services (BLM Report # 5-2323). The Federal lands are within the survey area. The survey resulted in the identification of 26 new archaeological sites, consisting of 10 historic and 16 prehistoric sites and 31 isolate occurrences. Evaluation of these sites revealed that only one archaeological site is eligible for inclusion to the National Register of Historic Places.

This site is an historic encampment and habitation area with associated debris scatters. It consists of eight rectangular possible habitation areas. Testing revealed living floors within two of these features; one contained artifacts and a possible hearth, the second contained the living surface only. The information contained at this site is believed to be important and could possibly add substantially to the understanding of turn-of-the-century railroad life in the Las Vegas Valley. Therefore, this site is recommended as eligible for nomination to the Historic Register under the guidelines set forth in Criterion D (Seymour, 1996).

A second Class III cultural resource survey was conducted in April of 1998 on 220 acres of federal land in the Las Vegas Valley. The survey was conducted by the Harry Reid Center for Environmental Studies, Marjorie Barrick Museum of Natural History at the University of Nevada, Las Vegas. Details of the survey can be found in the document titled *A Cultural Resource Investigation of Two Volkmar Exchange Parcels in the Las Vegas Valley, Clark County, Nevada*

and dated May of 1998. The survey identified five cultural resource sites. Evaluations of the sites revealed that two of the sites were eligible for inclusion in the National Register of Historic Places. However, neither of these sites are on lands included on the Federal lands and therefore will not be impacted by the Proposed Action.

Native American Communications Concerning Las Vegas Valley. The project area and Area of Potential Effect (APE) are located within Las Vegas Valley, a zone that was previously described in Class I Cultural Resource Report 5-2121. The results of the surveys indicated that with the exception of two identified sensitive subzones, the BLM-managed lands within Las Vegas Valley are considered to be very low in sensitivity for the presence of cultural resources eligible for nomination to the NRHP. The document also provided a recommendation to exempt additional field inventory for Federal actions outside sensitive subzones with project areas less than 200 acres in size. A variety of efforts have also been taken to inform regional Native Americans that BLM-managed land in the Valley was considered low in sensitivity. Meetings occurred in 1991 between the BLM Area Archaeologist, and the Cultural Committee of the Moapa Band of Piautes, and the Director of the Las Vegas Indian Center. These individuals agreed that the BLM-managed lands identified in Report 5-2121 were relatively low in sensitivity. Additional meetings occurred between the Area Archaeologist and members of the AhaMakav Cultural Society of the Mojave in 1995, with similar agreements. Research was also conducted using the results of an ethnographic study for the Intermountain Power Project in 1982 (Stoffe and Dobyns 1982:*Nuvagantu*), a line that crosses the Las Vegas Valley. No traditional sensitive areas were identified for the BLM-managed lands in Las Vegas.

Non-Federal Lands and Federal Withdrawal Lands

No cultural resource surveys have been completed on the non-Federal and Federal withdrawal lands. Pursuant the "*Programmatic Agreement Among the Bureau of Land Management, Nevada State Office, Nevada Division of Historic Preservation and Archaeology, and the Advisory Council on Historic Preservation Regarding the Identification, Evaluation and Treatment of Historic Properties Throughout the State of Nevada on Lands Managed by the Bureau of Land Management, Nevada State Office*" Section 3© the BLM will provide Nellis AFB with any cultural resource information pertinent to the lands. No Native American concerns or proprietary information have been associated with the non-Federal or Federal withdrawal lands.

3.1.8 Paleontology

A site records search was conducted to determine the presence of paleontological resources on the Federal, non-Federal, and Federal withdrawal lands (San Bernardino County Museum 1995). No previous paleontological field surveys were completed on the lands. The 1995 site records search

indicated that the majority of the lands are underlain by Quaternary Alluvium and were determined to have a low potential for significant nonrenewable paleontological resources. A subsequent site records search on the Federal withdrawal lands was performed by the San Bernardino County Museum in August of 1998. That record search indicated that portions of the non-Federal lands and the Federal withdrawal lands are underlain by fossiliferous Paleozoic limestone (with the possibility of Pleistocene fossils or woodrat middins associated with the limestone) or the fossiliferous late Miocene Muddy Creek Formation. However, surface disturbance is not anticipated in the course of this action. If subsequent surface disturbance becomes likely, a paleontologic survey will be performed.

3.1.9 Lands

Rights-of-way have been granted to private companies for utility lines that either cross or border the Federal, non-Federal, or Federal withdrawal lands. A list of all encumbrances was prepared for the Proposed Action and can be found in the case file.

3.1.10 Socio-Economics

The metropolitan area of Las Vegas is home to an estimated 1 million residents. The metropolitan area's population has increased substantially, growing 26.2% between 1990 and 1994, making it the fastest growing Metropolitan Statistical Area in the United States during this period (U.S. Bureau of Census, 1995). It is anticipated that the region's population will continue to grow rapidly.

Las Vegas' rapid population growth has triggered a critical need for housing; resulting development over the past 20 years has absorbed a significant portion of the private lands that are both available and suitable for master planned residential communities. To a large extent this is due to the fact that private lands surrounding the metropolitan area are interspersed with Federal lands. The Proposed Action will help to consolidate private lands to accommodate Las Vegas' continued growth and to consolidate Federal lands to benefit the management of those lands for the public interest.

3.1.11 Recreation

Federal Lands

Currently, the Federal lands are subject to disbursed recreational activities due to their fragmentation by private lands.

Non-Federal Lands

No pubic recreational activities currently occur on the non-Federal lands since they are currently in private ownership.

Federal Withdrawal Lands

The northern extent of Nellis AFB is bounded by the Las Vegas Dunes Recreation Area (LVDRA). Approximately 440 acres of Federal withdrawal lands located on the northwest portion and northern portion of Nellis AFB lands would be bound by the LVDRA. Additionally, approximately 160 acres are bisected by a gas pipeline utilized by recreationalists on the northwest portion of these lands. The natural gas pipeline is the main access to the LVDRA from the south.

3.1.12 Environmental Justice

On February 11, 1994 Executive Order 12898 was issued which states that all Federal actions must address and identify as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations in the United States. The Proposed Action was evaluated and no disproportionately high or adverse human health or environmental effects were identified for minority or low-income populations.

3.1.13 Hazardous Materials

Phase I Environmental Site Assessments (PESA) were performed on the Federal withdrawal lands, the non-Federal lands, and the Federal lands.

Federal Lands

An area of stained soil was observed adjacent to the Union Pacific Railroad right-of-way on the lands. The staining may have been the result of a petroleum product applied as a dust suppressant. One 55-gallon drum containing an unknown liquid was identified on the lands. An underground storage tank that appeared to contain water was also noted on the lands.

Federal Withdrawal Lands and Non-Federal Lands

Unauthorized dumping was the primary concern noted on the Federal withdrawal lands and non-Federal lands during performance of the PESA. Four areas of non-friable asbestos containing materials were identified. The following containers were noted on the lands: one 55-gallon drum

containing an unknown liquid and two plastic 5-gallon buckets containing used oil. In addition, an area of soil that appeared to be stained by a petroleum product was noted. Other non-hazardous construction and household materials were also identified throughout the lands.

CHAPTER 4.0 ENVIRONMENTAL CONSEQUENCES

The following chapter describes the environmental consequences of the Proposed Action and the No Action alternative. The Proposed Action includes the following:

1) the disposal, through exchange, of approximately 605 acres of Federal lands,
2) the acquisition, through exchange, of approximately 760 acres of non-Federal lands, and
3) the withdrawal of 2,400 acres of Federal lands to the Air Force for inclusion into the boundaries of Nellis AFB. The Federal withdrawal lands will include the 760 acres of non-Federal lands acquired through this exchange and an additional 1,700 of Federal lands, currently administered by the BLM, Stateline District.

The proposed action would result in a net gain of approximately 155 acres of Federal lands administered by the BLM, Stateline District. The withdrawal of Federal lands to the Air Force, approximately 2,400 acres, would change the management of these lands from the current sustained yield, multiple use objectives of the BLM to management for national defense purposes consistent with the Department of Defense objectives.

The acreage of the lands to be included in the Proposed Action are estimates based on existing land appraisals, cadastral surveys, and GIS calculations and are suitable for determining the environmental consequences of the alternatives considered. Minor changes in acreage of the lands included in the Proposed Action could occur as a result of revised and updated appraisals, further cadastral surveys, and final acreage calculations during title transfer. These changes are anticipated to be minor and would not significantly change the environmental consequences of the alternatives considered. Any major increases in the total acreage of lands to be included in the Proposed Action would require further environmental analysis pursuant to the NEPA.

The following chapter presents the environmental consequences the Proposed Action and the No Action alternative would have on the environmental resources presented in the previous chapter. The direct and indirect impacts to each environmental resource are presented for both the Proposed Action and the No Action alternative. Cumulative impacts the Proposed Action would have on the environmental resources of the action area are presented in Section 4.2 at the end of this chapter.

4.1 ENVIRONMENTAL CONSEQUENCES FOR THE PROPOSED ACTION AND THE NO ACTION ALTERNATIVE

4.1.1 Geology and Soils

Proposed Action

Direct Impacts: There would be no direct impacts to geology and soils.

Indirect Impacts: The Proposed Action would result in a net decrease of 155 acres available for development in the Las Vegas Valley. Disruption and displacement of the vegetation and topsoil would be expected with development of the lands. During the construction period, wind and water erosion would be possible. Wind erosion is regulated on construction sites throughout the Las Vegas Valley by frequent watering of the soils. Water erosion would only occur during a storm event. These events are infrequent in the Las Vegas area.

No Action

Direct Impacts: There would be no direct impacts to geology and soils.

Indirect Impacts: The No Action alternative would result in a net increase of 155 acres available for development in the Las Vegas Valley.

4.1.2 Minerals

Proposed Action

Direct Impacts: Approximately 2,460 acres of lands currently managed by the BLM, Stateline District would no longer be subject to the 1872 Mining Law. The BLM, Stateline District would acquire subsurface mineral rights on a net gain of approximately 760 acres, but these lands would not be open to mineral exploration.

Indirect Impacts: There would be no indirect impacts to minerals.

No Action

Direct Impacts: Approximately 2,420 acres of lands currently managed by the BLM, Stateline District would remain subject to the 1872 Mining Law. The BLM, Stateline District would not acquire the subsurface mineral rights on the 760 acres of non-Federal lands and these lands would remain open to mineral exploration at the land owners discretion.

Indirect Impacts: There would be no indirect impacts to minerals.

4.1.3 Air Quality

Proposed Action

Direct Impacts: There would be no direct impacts to air quality.

Indirect Impacts: The Proposed Action would result in a net decrease of 155 acres of lands available for development in the Las Vegas Valley. However, development of the 605 acres of Federal land are anticipated to have the following impacts.

Development of the Federal lands would produce two types of air contaminants: Exhaust emissions from construction equipment and fugitive dust generated as a result of soil movement. These construction impacts could be expected throughout the development phase. The emissions produced during grading and construction activities, are, by their nature, of short-term duration and cease upon completion of development activities.

Exhaust emissions from construction activities include those produced onsite as the construction equipment is used. The criteria pollutant emissions from construction activities are presented below.

Pollutant Emissions From Construction Equipment				
Emissions (tons/year)				
CO	ROC	NO_x	SO_x	PM_{10}
53.78	19.55	34.47	3.76	3.29

Construction activities are a source of fugitive dust emissions that may have a temporary impact on local air quality. Building and road construction are the prevalent construction categories with the highest emissions potential. Emissions are associated with land clearing, ground excavation, grading operations, and construction of the structures.

Dust emissions vary substantially from day to day, depending on the level of activity, the specific operations, and the prevailing weather. A large portion of the emissions would result from equipment traffic over temporary roads at the site. The quantity of fugitive dust generated is proportional to the area of land being worked and the level of construction activity. Emissions from heavy construction operations are directionally proportional to the silt content of the soil (that is, particles smaller than 75 microns in diameter) and inversely proportional to the square of the soil moisture. At the general plan level of analysis, the time frame/schedule, amount, and exact nature of grading required for complete development of the site is not known.

A generalized estimate of dust generation can be gained by applying the EPA AP-42 dust generation factor of 1.2 tons of fugitive dust per acre of disturbance per month of grading activity for the project. Excluding open space areas such as general open space, ridgeline, and resource areas, approximately 840 acres of the non-Federal lands may be subject to development grading. Assuming an estimated 2.5 year development period, an average of approximately 28 acres would be graded per month. Based on the EPA dust-generation factor, this estimate is very conservative (worst-case), in that it does not account for dust-control measures (e.g., watering). Application of fugitive dust control measures required by the Clark County Health District (CCHD) permit for construction activities would reduce emissions substantially. Such control measures would consist of 1) covering stockpiles or disturbance areas with temporary structures or plastic sheeting

thereby controlling approximately 90% of emissions; 2) treating unpaved roads with chemical dust suppressant and implementing a road maintenance program, reducing 65% of emissions; and 3) increasing the moisture content of soil to 1.5% with frequent watering of the area by water trucks, reducing 68% of emissions.

These measures will be incorporated as part of the planned project. Considering that the CCHD permit requirements for construction activities would provide at least 74% overall dust emission control, the total dust emission would be approximately 9 tons of dust per month or approximately 108 tons per year.

No Action

Direct Impacts: There would be no direct impacts to air quality.

Indirect Impacts: The No Action would result in a net increase of 155 acres available for development in the Las Vegas Valley and thus potentially increase levels of carbon monoxide and total suspended particulate during construction activities.

4.1.4 Water Resources

Proposed Action

Direct Impacts: There would be no direct impacts to water resources.

Indirect Impacts: The Proposed Action would result in a net decrease of 155 acres available for development in the Las Vegas Valley. It is estimated that the increase of 155 acres of lands available for development would reduce the need for approximately 287.5 ac/yr of additional water. No additional impacts to water resources are anticipated from the Proposed Action.

No Action

Direct Impacts: There would be no direct impacts to water resources.

Indirect Impacts: The Proposed Action would result in a net increase of 155 acres available for development in the Las Vegas Valley and could increase the need for a future water source by an estimated 287.5 af/yr.

4.1.5 Biological Resources Including Threatened, Endangered and Sensitive Species

Proposed Action

Direct Impacts: There would be no direct impacts to biological resources.

Indirect Impacts: The Proposed Action would result in a net increase of 155 acres of Mojave Desert habitat and a decrease of 155 acres available for development in the Las Vegas Valley. The proposed action would result in a net gain of 155 acres of Yellow Twotone Beardtongue habitat, as habitat for this species is present over the Federal, non-Federal, and Federal withdrawal lands. Habitat for the Las Vegas bear poppy, the Three-Cornered milkvetch, the Sticky ringstem, and the Large flowered sunray would stay the same, as these species are anticipated to be present in only the Federal withdrawal lands. The Proposed Action would result in a net gain of 155 acres of habitat for the Banded Gila monster and the Western Burrowing owl, as habitat for these species was observed on the Federal and non-Federal lands, and an estimated loss of 80 acres of habitat for the Western chuckwalla as habitat for this species was observed only on approximately 80 acres on the Federal lands. The Proposed Action would result in a net gain of 155 acres of foraging habitat for the following species: Spotted bat, Great western mastiff bat, small-footed myotis, Big free-tailed bat, and the Pale Townsend's big-eared bat. The Proposed Action would also result in a net gain of 155 acres of Mojave desert tortoise habitat. Although subsequent development of the Federal lands would impact Mojave desert tortoises and their habitat, such impacts would be mitigated by the operation of Federal law governing the taking of endangered species. BLM completed the programmatic Section 7 consultation , File No. 1-5-96-F-23R under the Endangered Species Act. The biological opinion concluded that the proposed action to implement the BLM's land use plan would not likely jeopardize the continued existence of the Mojave population of the desert tortoise. In 1995, the U.S. Fish and Wildlife Service (USFWS) issued a Section 10(a) permit (PRT7801045) to Clark County allowing the take of

desert tortoises and tortoise habitat as a result of otherwise authorized activities. A Desert Conservation Plan (DCP) was prepared as part of the application for the Section 10(a) permit (Henderson City Code Ch. 18.36). The DCP makes provisions for Federal disposal of lands, so once lands are transferred out of Federal ownership, subsequent development must comply with the terms and conditions of the Section 10(a) permit and the DCP. Additionally, any future actions on the non-Federal or Federal withdrawal lands would require additional NEPA analysis in order to assess potential impacts.

No Action

Direct Impacts: There would be no direct impacts to biological resources.

Indirect Impacts: The Proposed Action would result in a net increase of 155 acres of Mojave desert scrub habitat available for development in the Las Vegas Valley. Impacts to biological resources including threatened, endangered or sensitive species would be limited to illegal take from unmonitored activities.

4.1.6 Cultural Resources

Proposed Action

Direct Impacts: One archaeological site recommended for inclusion to the National Register of Historic Places would be mitigated prior to development of the Federal lands. A research design/treatment plan has already been prepared and approved by the BLM and the State Historic Preservation Office (SHPO) for this site as part of a previous action. Any future actions on the non-Federal lands or the Federal withdrawal lands would be subject to Section 106 consultation pursuant to the National Historic Preservation Act.

Indirect Impacts: There would be no indirect impacts to cultural resources.

No Action

Direct Impacts: There would be no direct impacts to cultural resources.

Indirect Impacts: The archaeological site located on the Federal lands would not be mitigated and could be further degraded by vandalism. Any unidentified cultural resources on the non-Federal lands would not be afforded Federal protection. Any future actions on the Federal lands or the Federal withdrawal lands would be subject to Section 106 consultation pursuant to the National Historic Preservation Act.

4.1.7 Paleontology

Proposed Action

Direct Impacts: There would be no direct impacts to paleontological resources.

Indirect Impacts: Future development of the Federal lands would result in the loss of 605 acres of lands with a low potential for paleontological resources. All paleontological resources that may be present below surface on the Federal lands may be impacted during construction activities. Construction crews would be instructed to notify the BLM if paleontological resources were unearthed during construction activities. Any future actions on the non-Federal lands or the Federal withdrawal lands would be subject to further environmental analysis pursuant to the NEPA.

No Action

Direct Impacts: There would be no direct impacts to paleontological resources.

Indirect Impacts: The BLM would not lose approximately 605 acres of lands with a low potential for paleontological resources. Any unidentified paleontological resources located on the Federal lands would not be impacted. Any unidentified paleontological resources located on the non-Federal land would not be afforded Federal protection and could be impacted during development of those lands.

4.1.8 Lands

Proposed Action

Direct Impacts: All lands would remain subject to existing valid rights. After withdrawal to the Air Force, approximately 2,460 acres of Federal lands would no longer be available for multiple use pursuant to FLPMA and the RMP. Withdrawal of the lands to Nellis AFB would significantly increase public health and safety within the QD arcs and would maintain ground crew readiness and live ordinance training programs at the base.

Indirect Impacts: There would be no indirect impacts to lands.

No Action

Direct Impacts: All lands would remain subject to existing valid rights. Approximately 2,460 acres would remain open to multiple use pursuant to FLPMA and the RMP. Approximately 2,460 acres would not be withdrawn to Nellis AFB and could significantly degrade ground crew readiness and live ordinance training programs at the base.

Indirect Impacts: There would be no indirect impacts to lands.

4.1.9 Socio-economics

The Proposed Action and the No Action alternative would not adversely impact socio-economics in the Las Vegas Valley either directly, indirectly, or cumulatively.

4.1.10 Recreation

Proposed Action

Direct Impacts: Approximately 605 acres of Federal lands utilized for dispersed recreational activities would be transferred to private ownership. Approximately 1700 acres of Federal withdrawal lands would be incorporated into Nellis AFB and would not be available for public recreation activities. No impacts to

the LVDRA are anticipated since no lands within its boundaries are included in the action. Additionally, the natural gas pipeline utilized as access to the LVDRA from the south will not be closed off at this time.

Indirect Impacts: There would be no indirect impacts to lands.

No Action

Direct Impacts: The Federal lands, approximately 605 acres would continue to be used for disbursed recreational activities. The non-Federal lands would remain in private ownership as subject to the discretion of the land owner. The approximately 1700 acres of Federal withdrawal lands would remain open to public recreation activities.

Indirect Impacts: There would be no indirect impacts to lands.

4.1.11 Environmental Justice

The Proposed Action and the No Action alternative would not impact minority or low-income populations in the Las Vegas Valley either directly, indirectly, or cumulatively.

4.1.12 Hazardous Materials

Proposed Action

Direct Impacts: Prior to completion of the action, environmental concerns noted on the Federal withdrawal lands, the non-Federal lands, and the Federal lands would be addressed and removed.

Indirect Impacts: There would be no indirect impacts to the lands.

No Action

Direct Impacts: Environmental concerns on the Federal Withdrawal lands, the non-Federal lands, and the Federal lands would remain in place.

Indirect Impacts: There would be no indirect impacts to the lands.

4.2 CUMULATIVE IMPACTS

The Las Vegas BLM District encompasses a total of approximately 3,332,000 acres of public lands. Approximately 173,593 acres of these lands are available for disposal through sale, exchange, or Recreation and Public Purpose patent to provide for the orderly expansion and development of southern Nevada.

The Proposed Action would result in a net gain of approximately 155 acres of Federal lands in the Stateline Resource District of the BLM.

Cumulative impacts associated with Air Quality are not expected to be significant since the Proposed Action will result in a decrease of 155 acres available for development in the Las Vegas Valley. However, some site specific impacts may occur with the development of the approximately 605 acres of Federal land. These impacts may include the creation of windblown dust which would be of concern within the Las Vegas Valley Non-Attainment Area, where levels of PM_{10} occasionally exceed National Ambient Air Quality Standards (NAAQS). Compliance with local regulatory agencies permitting requirements would be required which would help to minimize impacts to the air resource.

Additionally, estimates of cumulative impacts for PM_{10} and CO emissions due to land disposals are based on data obtained from the Clark County Health District and Clark County Comprehensive Planning. Cumulative impacts from land development activities would result in an annual PM_{10} output of 757 tons, and a total of 15,140 tons (based on 0.19 tons/acre/year) over the next 20 years. These figures no doubt exaggerate future emissions in that they assume that all of the public land acres disposed of will be developed. In practice, all the acres probably will not be developed. Moreover, development activities are not truly cumulative in the sense that an acre of land under construction and the source of 0.19 tons of PM_{10} during 1999, would be developed in the year 2000. Developed land is not included in the CCHD list of PM_{10} emission sources (Naylor, 1997).

Cumulative impacts for CO emissions from both private and public land development activities would result in an annual output of 5,449 tons, a total of 109,180 tons (based on 1.37 tons/acre/year) over the next 20 years. This anticipated increase is due primarily to growth induced increases in motor vehicles and their resultant emissions, and in opposition to construction-related PM_{10} emissions, is truly cumulative. These estimates represent a worst-case scenario by not factoring in technological advances that will undoubtably be made to reduce CO from internal combustion

engines. It also does not consider additional legal or regulatory measures that may be taken by Federal, state, or local governments to reduce CO emissions.

The proposed action would result in a management change on approximately 2,400 acres of public lands in the Las Vegas BLM District. The management of the withdrawn lands would change from the current sustained yield, multiple-use management plan to use for national defense purposes pursuant to the Department of Defense objectives. Compared to the 3,330,000 acres of lands currently managed by the Las Vegas BLM District, the Proposed Action would not significantly contribute to the cumulative impacts of BLM management practices in southern Nevada.

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APPENDIX A

LEGAL DESCRIPTIONS OF THE FEDERAL, NON-FEDERAL, AND FEDERAL WITHDRAWAL LANDS

FEDERAL LANDS

Township 22 S., Range 60 E.

Section : 12 S1/2SW1/4NW1/4NE1/4, SE1/4SE1/4NW1/4NE1/4, NE/14NE1/4SW1/4NE1/4, S1/2NE1/4SW1/4NE1/4, E1/2NW1/4SW1/4NE1/4, S1/2SW1/4SW1/4NE1/4, SE1/4NE1/4SE1/4NW1/4, E1/2SE1/4SE1/4NW1/4, NE1/4NE1/4NE1/4SW1/4, SW1/4NE1/4NE1/4SW1/4, N1/2NW1/4NE1/4SW1/4, SW1/4SW1/4NE1/4SW1/4, N1/2SE1/4NE1/4SW1/4, SW1/4SE1/4NE1/4SW1/4, NE1/4NE1/4SE1/4SW1/4, NW1/4NW1/4SE1/4SW1/4, NW1/4NE1/4NW1/4SE1/4, NW1/4NW1/4SE1/4, SW1/4NW1/4SE1/4, NW1/4NW1/4SW1/4SE1/4, W1/2SE1/4SW1/4SE1/4.

Section 13 : W1/2SW1/4NE1/4NW1/4, SE1/4SE1/4SW1/4NW1/4, S1/2SE1/4SW1/4NW1/4, W1/2NW1/4SE1/4NW1/4, NE1/4NE1/4NW1/4SW1/4, SE1/4SW1/4NW1/4SW1/4, NW1/4SE1/4NW1/4SW1/, S1/2NW1/4SW1/4SW1/4, NW1/4SW1/4SW1/4SW1/4.

Section 36 : NE1/4NE1/4NE1/4NW1/4, S1/2NE1/4NE1/4NW1/4, W1/2NE1/4NW1/4, SE1/4NE1/4NW1/4, NE1/4NE1/4NW1/4NW1/4, SW1/4NE1/4NW1/4NW1/4, SE1/4SW1/4NW1/4NW1/4, NE1/4SE1/4NW1/4NW1/4, SW1/4SE1/4NW1/4NW1/4, SW1/4NE1/4SW1/4NW1/4, SE1/4NW1/4SW1/4NW1/4, N1/2SW1/4SW1/4NW1/4, SW1/4SW1/4SW1/4NW1/4, SE1/4SW1/4NW1/4, NW1/4NE1/4SE1/4NW1/4, NE1/4NW1/4SE1/4NW1/4, W1/2SW1/4SE1/4NW1/4, W1/2W1/2NE1/4SW1/4, E1/2NE1/4NW1/4SW1/4, W1/2NW1/4SW1/4, SE1/4NW1/4SW1/4, N1/2SW1/4SW1/4, W1/2SW1/4SW1/4SW1/4, W1/2SE1/4SW1/4SW1/4, W1/2E1/2SE1/4SW1/4, SW1/4SE1/4SW1/4, W1/2SE1/4SW1/4SE1/4.

Township 22 S., Range 61 E.

Section : 32 S1/2NE1/4NE1/4, S1/2NE1/4SW1/4NE1/4, SW1/4SW1/4NE1/4, SE1/4SW1/4NE1/4, E1/2SE1/4NE1/4, N1/2NW1/4SE1/4NE1/4, SE1/4NW1/4SE1/4NE1/4, SW1/4SE1/4NE1/4, E1/2NE1/4SE1/4, NW1/4NW1/4NE1/4SE1/4, S1/2NW1/4NE1/4SE1/4, SW1/4NE1/4SE1/4, NW1/4SE1/4, N1/2NE1/4SW1/4SE1/4, NW1/4SW1/4SE1/4, S1/2SW1/4SE1/4, SE1/4SE1/4.

Township 23 S., Range 61 E.

Section 6 : Government Lots 5 & 6, N1/2SW1/4SE1/4NW1/4

NON-FEDERAL LANDS

Township 19 S., Range 62 E.

Section : 35 S1/2NW1/4, NW1/4SE1/4.

Township 20 S., Range 62 E.

Section : 2 SE1/4NE1/4, E1/2SW1/4, SE1/4

Section : 10 E1/2SE1/4

Section : 11 E1/2NW1/4, SW1/4

Section : 15 NW1/4NE1/4, W1/2SW1/4NE1/4

FEDERAL WITHDRAWAL LANDS

Township 19 S., Range 62 E.

Section : 25 NE1/4 – that portion that is south of Las Vegas Blvd.

Township 19 S., Range 63 E.

Section : 27 N1/2SE1/4, SW1/4SE1/4

Section : 34 NE1/4

Township 20 S., Range 63 E.

Section : 3 SE1/4

Township 20 S., Range 62 E.

Section : 1 S1/2NW1/4, S1/2

Section : 11 E1/2NW1/4, SW1/4, E1/2

Section : 12 W1/2NE1/4, NW1/4, W1/2SW1/4

APPENDIX B

PHASE I ENVIRONMENTAL ASSESSMENT
FONSI AND DR
(not signed as of 1/15/99)

FINDING OF NO SIGNIFICANT IMPACT

VOLKMAR LAND EXCHANGE - PHASE II
AND
NELLIS AIR FORCE BASE WITHDRAWAL

ENVIRONMENTAL ASSESSMENT NO. NV-056-99-049

I. BACKGROUND INFORMATION

On March 10, 1994 (later amended on November 28, 1994 and January 14, 1999) the BLM and the Proponent entered into a non-binding Agreement to Initiate a Land Exchange. Included within the most recent amendment is the withdrawal of approximately 2,252 acres by Nellis Air Force Base (Nellis AFB). This exchange is proposed to be completed as an assembled land exchange and withdrawal under the exchange provisions of the Federal Land Policy and Management Act and regulations under 43 CFR 2200 and 43 CFR 2300. As an assembled land exchange, it is being completed in separate phases. This decision addresses Phase II of the exchange. Phase I was completed on May 4, 1999.

Phase I of the exchange included non-Federal lands within Red Rock Canyon National Conservation Area for Federal lands in T. 22 S., R. 60 E., Sec. 32.

In Phase II, the proponent has selected approximately 519 acres of Federal land located within T. 22 S., R. 60 E., Sec. 12, and 36; T. 22 S., R. 61 E., Sec. 32; and T. 23 S., R. 61 E., Sec. 6. The proponent has offered approximately 497 acres of non-Federal lands in T. 20 S., R. 62 E., Sec 2, 10, 11, and 15, and T. 19 S., R. 62 E., Sec. 35. Nellis AFB proposes to withdraw approximately 2,252 acres, including the non-Federal lands in the exchange and lands in T. 19 S., R. 62 E., Sec. 25; T. 19 S., R. 63 E., Sec. 6, 27 & 34; T. 20 S., R. 62 E., Sec. 1, 11, and 12; and T. 20 S., R. 63 E., Sec. 3.

The following Finding of No Significant Impact addresses Phase II of the Volkmar Exchange. The transaction will facilitate Federal acquisition and withdrawal of properties located adjacent to Nellis AFB in Clark County, Nevada which are necessary for public safety.

II. FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis of potential environmental impacts, including cumulative impacts, for the non-Federal lands and Federal Withdrawal lands contained in EA No. NV-056-99-049 dated June 1, 1999 as summarized below, I have determined that the impacts associated with the Phase II of the Volkmar Exchange are not expected to be significant, and an EIS is not required.

None of the impacts analyzed in EA No. NV-056-99-049 met the criteria identified in 40 CFR 1508.27 (a or b) for a determination of significance.

III. SUMMARY

Volkmar Exchange:

Assessment of the impacts arising from the transfer of Federal land to private ownership and the withdrawal of lands by Nellis AFB were addressed in EA No. NV-056-99-049 dated June 1, 1999. The lands to be withdrawn by Nellis AFB include the non-Federal lands in the exchange and approximately 1,755 acres of Federal lands managed by the BLM.

A) Non-Federal Lands and Federal Withdrawal Lands

Transfer of the non-Federal lands to public ownership and their subsequent withdrawal along with the Federal Withdrawal lands to Nellis Air Force Base would have positive impacts and be in the best interest of the general public. The withdrawal would aid in the creation of a safety buffer around Live Ordnance Loading Areas on the base to promote public safety as required by Department of Defense Directive 6055.9.

The following is a summary of the impacts as identified in EA No. NV-056-99-049 for the non-Federal land and the Federal Withdrawal land:

The non-Federal lands and Federal Withdrawal lands assessed in the EA indicate that public health and safety would be significantly increased, ground crew readiness would be enhanced, and live ordnance training programs would be maintained through completion of the subsequent withdrawal.

No impacts to geology and soils, air quality, water resources, paleontology, and socio-economics are anticipated as a result of the proposed action (EA pp. 35, 36, 39, 42 and 43)

Minerals (EA p. 35). The BLM, Las Vegas Office would acquire mineral rights on the non-Federal lands resulting in a net gain of approximately 497 acres. However, the withdrawal would preclude mineral entry on approximately 2,252 acres adjacent to Nellis AFB.

Threatened, Endangered and Special Status Species (EA pp. 39-41). No direct impacts are anticipated as a result of the proposed action. Any future actions on the acquired non-Federal or withdrawal lands would be subject to Section 7 consultation with the U.S. Fish and Wildlife Service for any Threatened or Endangered Species.

Cultural Resources (EA pp. 30 and 41). Pursuant to the "*Programmatic Agreement Among the Bureau of Land Management, Nevada State Office, Nevada Division of Historic Preservation and Archaeology, and the Advisory Council on Historic Preservation Regarding the Identification, Evaluation and Treatment of Historic Properties Throughout the State of Nevada on Lands Managed by the Bureau of Land Management, Nevada State Office*" Section 3c, the BLM will provide Nellis AFB with any cultural resource information pertinent to the lands. No Native American concerns or proprietary information have been associated with the non-Federal or Federal withdrawal lands. Any future actions on the non-Federal or the Federal withdrawal lands would be subject to Section 106 consultation pursuant to the National Historic Preservation Act.

Lands (EA pp. 42-43). Upon acquisition of the non-Federal lands and the completion of the withdrawal to the Air Force, land management practices would change on approximately 2,252 acres. Of these lands, approximately 497 acres are presently in private ownership and 1,755 acres are Federal lands. Once the acquisition is completed and the subject lands are withdrawn to Nellis AFB, they would no longer be available for multiple use management pursuant to FLPMA and the RMP. Withdrawal of the lands to Nellis AFB would increase public health and safety within the Quantity Distance (QD) arcs and would maintain ground crew readiness and live ordnance training programs at the base.

Recreation (EA p. 43). Approximately 1,755 acres of Federal withdrawal lands would be incorporated into Nellis AFB and would not be available for public recreation activities. No impacts to the LVDRA are anticipated since no lands within its boundaries are included in the action. Additionally, the natural gas pipeline utilized as access to the LVDRA from the south will not be closed off at this time.

Environmental Justice (EA p. 44). The Proposed Action and the No Action alternative would not impact minority or low-income populations in the Las Vegas Valley either directly, indirectly, or cumulatively.

Hazardous Materials (EA p. 33). As a result of unauthorized dumping, several environmental conditions were noted on the lands and identified in the Phase I Environmental Site Assessment (ESA) dated December 1998. As of May 1999, all environmental concerns identified in the ESA have been cleaned up.

B) Federal Lands

The Federal lands are identified for disposal in the Las Vegas Resource Management Plan (RMP) due to the fragmented Federal land ownership pattern in the Las Vegas Valley and easement identification problems.

The following is a summary of the impacts as identified in EA No. NV-056-99-049 for the Federal land:

The Federal lands assessed in the EA indicate that the exchanged lands would be used for community expansion and commercial and residential uses. Specific issues are addressed below.

No impacts to paleontology, socio-economics and hazardous materials are anticipated as a result of the proposed action (EA pp. 42, 43, and 44)

Geology and Soils (EA p. 35). No direct impacts are anticipated as a result of the proposed action. However, indirect impacts associated with the disturbance and displacement of vegetation and topsoil would be expected with the development of the lands once conveyed to private ownership. Topsoil on the lands after conveyance would be disturbed and displaced during development.

Minerals (EA pp. 17 and 35). No direct impacts are anticipated as a result of the proposed action. The Federal lands are considered prospectively valuable for oil, gas, and compounds of potassium and sodium. The lands are not considered valuable for other leasable or geothermal resources. Sand and gravel is a saleable mineral and is the primary mineral material located in the area of the Federal selected lands. Because the lands are considered prospectively valuable for oil, gas, potassium and sodium, and the potential for sand and gravel is moderate, these minerals will be reserved to the United States. However, upon transfer to private ownership, the land would no longer be subject to the 1872 Mining Law, as amended.

Air Quality (EA p. 36-38). No direct impacts are anticipated as a result of the proposed action. However, indirect impacts associated with development of the lands after transfer to private ownership may occur. Two types of air contaminants would be associated with development of the Federal lands: exhaust emissions from construction equipment and fugitive dust as the result of soil movement. No long term residual adverse effects on Air Resources are expected from the proposed action. The impacts expected to occur during the duration of the proposed action may include an increase in windblown dust emissions from grading and earth moving activities associated with construction. This potential increase in windblown dust emissions during construction activities would be a constant value and not additive, since the emissions would be reduced to little if any upon completion of the development. A slight increase in hydrocarbons would be expected due to additional combustion engine vehicles continually located in the area. However, new technology for combustion engines has reduced the CO emissions, which results in a minimal increase of CO.

Water Resources (EA p. 39). No direct impacts are anticipated as a result of the proposed action. However, indirect impacts associated with a net increase of 21.66 acres of developable lands in the Las Vegas Valley may occur. It is estimated that the increase of approximately 21.66 acres of lands available for development may result in the need for approximately 40 acre feet per year of additional water.

Threatened, Endangered and Special Status Species (EA pp. 39-41). No direct impacts are anticipated as a result of the proposed action. Although subsequent development of the Federal lands would impact Mojave desert tortoises and their habitat, such impacts would be mitigated by the operation of Federal law governing the taking of endangered species. In 1995, the U.S. Fish and Wildlife Service (USFWS) issued a Section 10(a) permit (PRT7801045) to Clark County allowing the take of desert tortoises and tortoise habitat as a result of otherwise authorized activities. A Desert Conservation Plan (DCP) was prepared as part of the application for the Section 10(a) permit (Henderson City Code Ch. 18.36). The DCP makes provisions for Federal disposal of lands, so once lands are transferred out of Federal ownership, subsequent development must comply with the terms and conditions of the Section 10(a) permit and the DCP.

Cultural Resources (EA p. 41). One archaeological site recommended for inclusion to the National Register of Historic Places would be mitigated prior to development of the Federal lands. A research design and treatment plan has already been prepared and approved by the BLM and the State Historic Preservation Office for this site as part of a previous action.

Lands (EA p. 42). The lands would remain subject to the existing valid rights. The BLM would

transfer approximately 519 acres to private ownership.

Recreation (EA p.43). Approximately 519 acres of Federal lands utilized for dispersed recreational activities would be transferred to private ownership.

Environmental Justice (EA p. 44). The Proposed Action and the No Action alternative would not impact minority or low-income populations in the Las Vegas Valley either directly, indirectly, or cumulatively.

C) Cumulative Effects

Cumulative effects associated with the transfer of the Federal and Non-Federal lands and the withdrawal of the non-Federal and Federal Withdrawal lands have been examined and are largely beneficial. The withdrawal of the non-Federal lands and the Federal Withdrawal lands would serve as a safety buffer between Nellis Air Force Base and the public and would comply with Department of Defense Directive 6055.9. Disposal of the Federal lands is in accordance with the Las Vegas RMP which has earmarked certain properties in the Las Vegas Valley for disposal due to the fragmented Federal land ownership pattern in the Las Vegas Valley and easement identification problems. Development of the Federal lands would also aid in community expansion for commercial, industrial, and residential uses.

Michael F. Dyer
Field Manager

7/2/99
Date

FINAL ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

Environmental Assessment

The Air Force proposes to purchase Parcels 1 and 4 using an Urgent Land Acquisition. Nevada Environmental Consultants Inc (NECI) have performed an Environmental Assessment (EA) and Federal Land Policy Management Act (FLPMA) documentation for a land swap and withdrawal for properties adjacent to parcels 1 and 4. The attached letter from NECI states that all of the background information required for FLPMA documentation was acquired for parcels 1 and 4 during the investigation of the rest of the properties. The proposed action in the BLM EA is for a land swap and AF withdrawal of properties. Although a purchase is not the same thing as a withdrawal, the effects of a land purchase would be similar. Because the background information investigation included these parcels and the effect of a purchase would be similar to a purchase, the environmental impacts presented in the BLM EA would apply to parcels 1 and 4.

Finding of No Significant Impact

1.0 Name of the Action:

The name of the action is Urgent Land Acquisition for Nellis Parcels 1 and 4 at the Live Ordnance Loading Area, also included in this Finding of No Significant Impact (FONSI) is the adoption of the BLM's EA/FONSI.

2.0 Description of the Proposed Action and Alternatives:

The proposed action would be to purchase parcels 1 and 4 at the Live Ordnance Loading Area through an Urgent Land acquisition. The BLM's EA/FONSI analyzed the land swap and withdrawal for parcels surrounding parcels 1 and 4.

3.0 Summary of Environmental Impacts:

There would be little or no environmental impacts due to the purchase of these parcels.

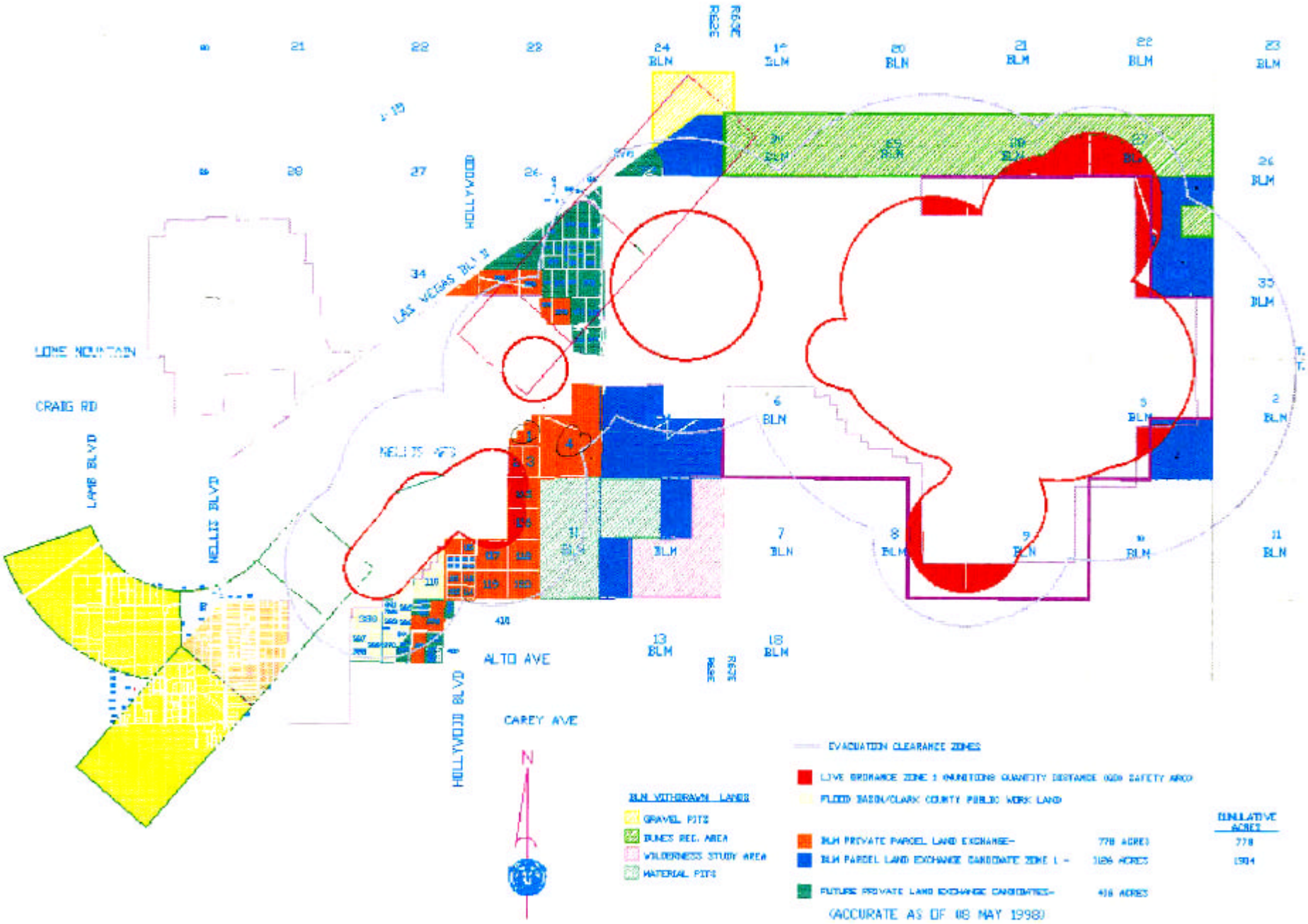
4.0 Conclusion:

On the basis of the findings of the above Environmental Assessment and the Environmental Assessment for the Volkmar Land Exchange and Nellis Air Force Base Withdrawal, no significant impact is anticipated from the proposed action on human health or the natural environment. A Finding of No Significant Impact is warranted and an Environmental Impact Statement is not required for this action.

Andrew S Dichter

02 DEC 1999

ANDREW S. DICHTER
Colonel, USAF
Commander


LONE MOUNTAIN
CRAIG RD
LAMB BLVD
NELLIS BLVD
HOLLYWOOD BLVD
LAS VEGAS BLVD
ALTO AVE
CAREY AVE
EVACUATION CLEARANCE ZONES
BLM WITHDRAWN LANDS
GRAVEL PITS
DUNES REC. AREA
WILDERNESS STUDY AREA
MATERIAL PITS
LIVE ORDNANCE ZONE 1 QUANTITY DISTANCE (QD) SAFETY AREA
FLOOD BASIN/CLARK COUNTY PUBLIC WORK LAND
BLM PRIVATE PARCEL LAND EXCHANGE- 778 ACRES
BLM PARCEL LAND EXCHANGE CANDIDATE ZONE 1 - 1126 ACRES
FUTURE PRIVATE LAND EXCHANGE CANDIDATES- 418 ACRES
CUMULATIVE ACRES
778
1904
(ACCURATE AS OF 08 MAY 1998)